TRADE AND INDUSTRY

12 October 1972 Volume 9 No 2 10p

Selling to the world's largest manufacturing industry

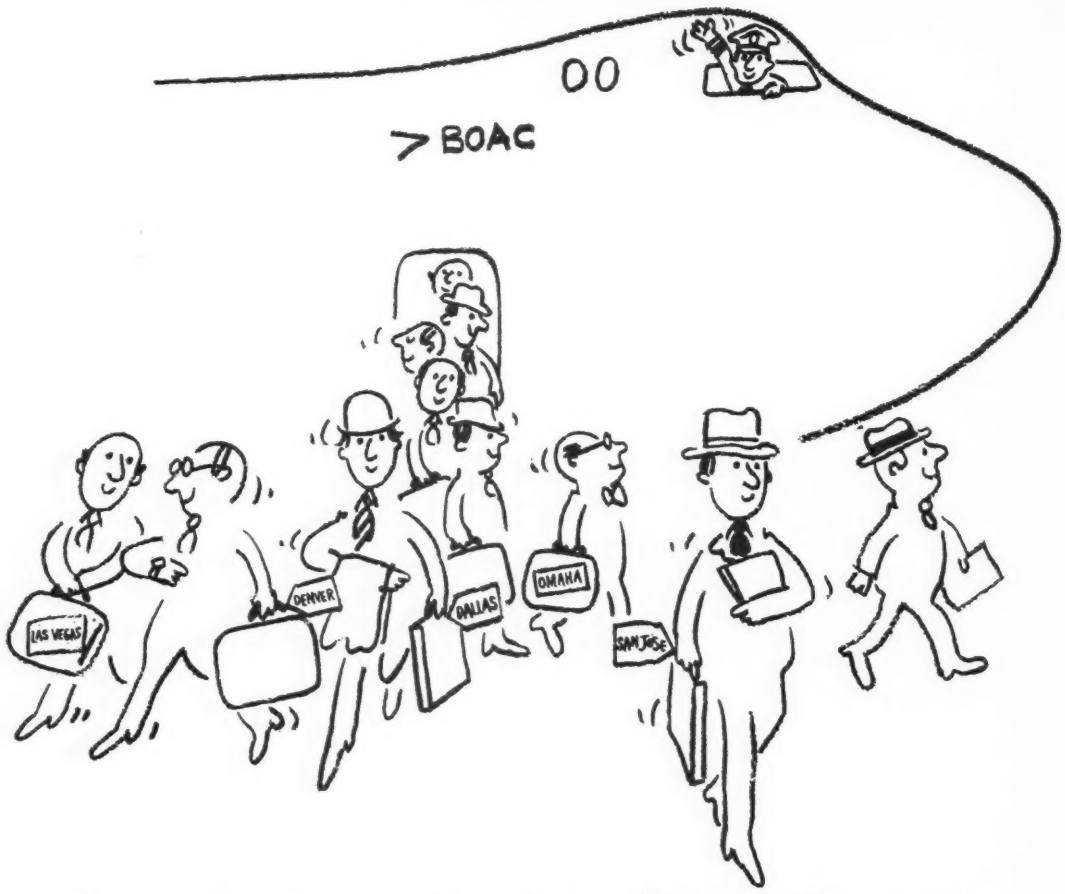
Stuttgart Shopping Week reinforces S. German Trade Drive

Restrictions on foreign investment in Australia

Consolidated list of goods subject to security export control

Guidelines for Industrial Development Boards

Every day, our 747 flies non-stop to Chicago.



Every day connections leave Chicago, for over 150 US destinations.

Not even New York can match Chicago when it comes to internal US flights.

Chicago boasts 1141 of them. Every day.

32 to Minneapolis alone. 27 to St Louis. 24 to Pittsburgh. 19 to Kansas City. 19 to Kalamazoo. And flights to over 150 other places in the USA.

Now you can fly non-stop to Chicago in the comfort of a BOAC 747.

Take off from London at 2pm, any day of the week. Sit back and enjoy a good film, or listen to your favourite music*. Land at Chicago at 4.25pm – in time for flights to most American cities.

This is just one of many ways we lead across the Atlantic.

No other airline, for instance, flies direct to so many major North American cities. No other European airline offers you a choice of 80 flights a week to North America. And no other airline offers you a choice of flying 707 or VC10 or 747.

In fact no other airline in the world serves America better than BOAC.

Not even the Americans.

We'll take good care of you.

BOAC

*Nominal extra charge for in-flight entertainment.

Trade and Industry

Incorporating the Board of Trade Journal and New Technology
Volume 9. No. 2. Pages 45 to 104. October 12, 1972. Price 10p. Net subscription, post inclusive, £7.60
Editorial address: Room 437, Department of Trade and Industry, 1 Victoria St., SW1H 0ET. 01-222 7877
Advertisements: HMSO, Room D94. Atlantic House, Holborn Viaduct, London EC1P 1BN. 01-248 9876 ext. 6147
Subscriptions: HMSO, PO Box 569, London, SE1. 01-928 6977 ext. 472

BRITISH OVERSEAS TRADE BOARD

46 **Aspects of US markets—3: Selling to the world's largest manufacturing industry**
49 Chief Executive for Trade Board
49 Mr. Davies at Copenhagen seminar
EXHIBITIONS AND FAIRS
50 **Stuttgart shopping week reinforces South German Trade Drive**
51 Specialist anaesthetic goods attract notice at Kyoto congress
52 Caravan-makers try to regain their share of German market
52 Intense competition among cattle-breeders at Italian fair
52 Letter to the Editor: Thanks for joint venture
53 Good business at Frankfurt Automechanika
53 Joint venture succeeds at Montreal footwear show
55 Mr. Brezhnev and Mr. Kosygin precede buyers to British agricultural stands
55 Woodworking-machine makers do well at Louisville
55 MISSIONS AND TOURS
57 EXPORT ORDERS

TRADE INFORMATION

58 **Restrictions of foreign investment in Australia**
58 Line of credit for Bulgaria: final date for contracts extended
58 Auto-Telex to Guatemala and Venezuela
58 Applications for temporary exemption from import duty
59 Import Duties (Temporary Exemptions) (No. 13) Order, 1972
59 Applications for reimposition of import duty
59 Unido procurement procedure brochure
59 Thailand: tax changes
60 **Capital expenditure in Japan: Summary of regulations**
TARIFF AND TRADE NOTICES
65 **Argentina:** Tariff amendment. Method of payment for sheet glass. Tariff amendments
63 **Australia:** Result of Dumping Tariff Board inquiry on insulators. Door closers
65 **Brazil:** Duty reduction on watches
65 **Canada:** Anti-dumping legislation
62 **France:** Value Added Tax: motor cycles
65 **Jamaica:** Export Industry Encouragement Law 1956
63 **Malaysia:** Sales Tax Act. Industrial development
63 **Mauritius:** Import control of gloves
64 **New Zealand:** Customs tariff changes
65 **Peru:** Prohibitions
62 **South Africa:** Customs tariff application. Explosives regulations; Motor-cyclists' helmets
62 **Spain:** Customs tariff amendments
62 **Sweden:** Tax increases on cigarettes and alcoholic beverages—correction
64 **Western Samoa:** Customs tariff changes
62 **Yugoslavia:** Credit business with foreign countries
62 **Zambia:** Exchange control
67 **Consolidated list of goods subject to security export control**

HOME FEATURES AND NEWS

84 Excessive inflation the 'dirt in the machine'—Mr. John Davies
85 **Guidelines for Industrial Development Boards**
86 Development Minister on hurdles to industrial progress
87 Industrial Development Unit senior appointments completed
87 Welsh Industrial Development Board appointed
87 Success hampered by a 'fearful handicap'—Mr. John Davies
88 DTI understands shipping industry's problems—Lord Limerick
88 **New measures to warn rogue shipping in the Channel**
89 The need for a co-ordinated marine technology policy
89 Review of aircraft minimum noise routes
90 **Prevention of Fraud (Investments) Act 1958**
90 Authorised Unit Trust Schemes
91 New sawmill at Fort William
91 Metric packs for sugar
91 Monopoly Commission and breakfast foods
91 Appointments to Design Council
91 UKAEA annual report published
91 **Moneylenders Acts, 1900 to 1927**

EUROPEAN COMMUNITIES

94 **New EC legislation**—Common agricultural policy. Imports from non-member countries. UNCTAD Generalised Preferences system. EEC/Turkey Agreement
95 British companies in Europe
96 **NEW PUBLICATIONS**

STATISTICS

97 **The economy: selected indicators**
98 **UK overseas trade—Unit value and volume index numbers for August**
98 Retailers' stocks in August
98 Index of retail sales in N. Ireland
99 Footwear industry—orders and deliveries
99 More detail on motor trades
100 Turnover of the catering trades in August
100 Domestic furniture deliveries in July 1972
102 Business Monitors available
102 New Monitor for agricultural machinery
102 British Film Fund Agency returns
102 Registrations of British and foreign films
102 Cinema admissions and takings in May
102 Retail Sales in August—correction
103 **Index to statistics**
104 **GOVERNMENT SALES**

© Crown Copyright 1972
Short extracts can be published without specific permission providing that the source is duly acknowledged.
The views expressed in contributions to *Trade and Industry* emanating from other than official sources are not necessarily those of Her Majesty's Government.
The Government will accept no responsibility for any of the statements in the advertisements and the inclusion of any particular advertisement is no guarantee that the goods or the service advertised herein have official approval

A • •

ASPECTS OF US MARKETS—3

Selling to the world's largest manufacturing industry

By J. T. Hyslop, British Consulate-General (Commercial), Detroit

THE US automotive industry is the world's biggest manufacturing business. In 1972 production of domestic passenger cars is likely to be around 9 million vehicles with a value of over $22 billion (a US billion is one thousand million); of trucks over 2 million with a value, including bodies, of $6.7 billion; of truck trailers 140,000 with a value of $700 million. The mood of the industry is presently buoyant, with sales in all classes of production, particularly trucks, on a sharp upward trend. Production and profits are at, or near, record levels. The threat by imports of passenger cars, up around 1.5 million units in 1971, is considerably diminished, and the US industry believes that with popular acceptance of its domestic compacts and sub-compacts, imports will level off at around 15 per cent by unit of the market.

The industry is unusual in that, despite its enormous growth, it remains centred in the area in which it had its beginnings. All four major producers of passenger cars, General Motors, Ford, Chrysler, and American Motors, who have approximately 53 per cent, 28 per cent, 16 per cent, and 3 per cent of domestic output, are headquartered in Detroit. These four companies also have between them about 90 per cent of US truck business. Although over the years their assembly operations have been dispersed nationwide, with only about 30 per cent of production remaining in Michigan, management, engineering, research, purchasing and styling are still tightly concentrated in the Greater Detroit and lower Michigan areas. 'Detroit' remains synonymous in American business language with the motor industry.

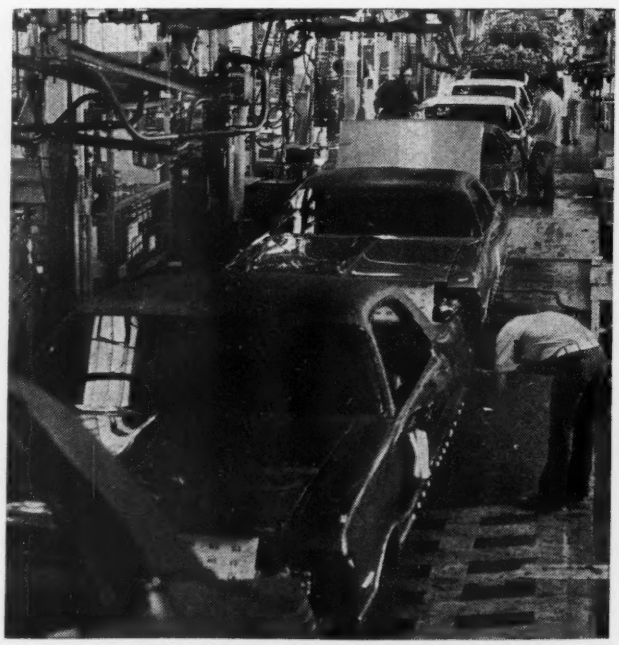
General Motors, Ford and Chrysler, the so-called 'Big Three', have important non-automotive interests, including such products as refrigeration, radios and television, motor craft, and military equipment. They also have overseas operations in many countries of the world including the United Kingdom, which are in aggregate almost equal in volume to their US business. The scale of these companies can be judged by the fact that their total sales amounted in 1971 to over £20,000 million and that General Motors has 773,000 employees and Ford 433,000 worldwide.

Faced with continuing pressure to hold prices and mounting manufacturing costs resulting from the mandatory incorporation of a growing number of safety and air pollution control devices and equipment, the US automakers are becoming increasingly interested in overseas sources of supply as a means of cost saving without sacrificing product quality. Indeed, at a recent monthly meeting of the local society of manufacturers' agents, where the speaker was an important member of the purchasing staff of one of the 'Big Three', the theme of his address was the international aspect of his corporation's activities, and the part which can be played by manufacturers' agents in assisting in cost saving through overseas procurement.

Certain British manufacturers and Detroit manufacturers' agents have been conscious of the market opportunities for some time. One large company with an office in Detroit staffed by British sales engineers, is supplying forged connecting rods and steering arms (a 'safety critical' item), a wide variety of gears, malleable iron castings, fully machined crankshafts, engine bearings, transmission components, and a variety of specialised fasteners, to US manufacturers of cars, trucks, and off-the-road vehicles, and some components to the aftermarket. A Detroit manufacturers' agent, with many years of experience in the automotive field, is selling British castings for rear axle assemblies and gearbox casings to US truck manufacturers.

In the automotive business there are two distinct main markets for parts and components; the Original Equipment (OEM) market, comprising the parts and components which are bought in by the prime producers of cars and trucks for incorporation in the vehicles turned out on their production lines; and the so-called 'aftermarket' of replacement spares and accessories. In addition, there is a secondary but still important OEM market for parts to be incorporated in special-purpose and off-the-road transport, recreational and leisure vehicles, and military equipment.

A firm does not have to be big in itself to compete for a share of automotive business. Approximately half of the gross income of the motor producers is spent on purchases of parts, equipment, raw materials and services, and many quite small firms are successful in competing for a piece of this very



Production line at one of Chrysler Corporation's Detroit assembly plants.

large cake. General Motors states that of the 35,000 companies from whom it buys, over 90 per cent employ less than 500 workers and over 75 per cent less than 100.

However, so far as OEM business is concerned, the factor which is really decisive is admirably summed up in a General Motors booklet of advice to would-be suppliers—'dependability in meeting schedules, day after day, month after month, despite problems and obstacles'. In an industry in which an entire plant can be closed down and personnel sent home through the shortage of a simple component or sub-assembly of minor intrinsic value, continuity of supply of production materials is of primary importance and is achieved by a staff of 'follow-up men', to each of whom is allocated a number of related 'bought outside' parts. His sole responsibility is to ensure that a sufficient number of those parts is available and will continue to become available daily to maintain production schedules. At the same time he must avoid excessive inventories which are costly in terms of tied-up working capital, wasted manufacturing space, and excessive handling.

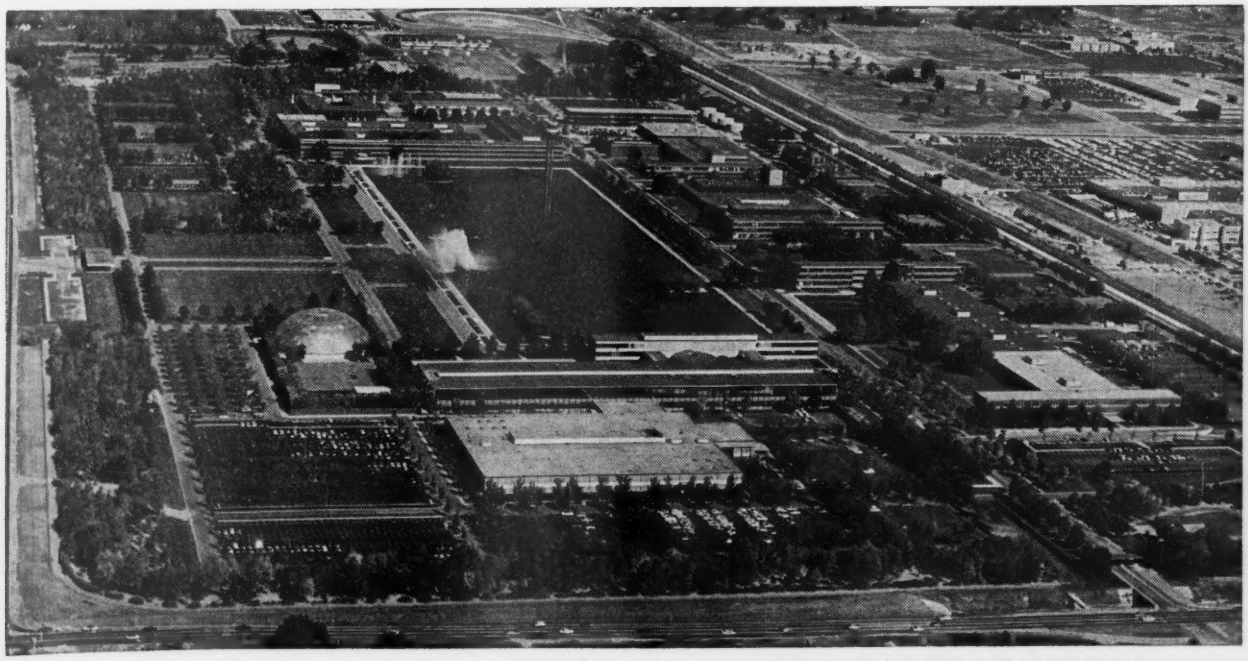
Apart from any price advantage that he may have, an overseas supplier who wished to enjoy continuing success as a source of OEM items, must ensure that doing business with his company involves no more problems than are encountered in sourcing in the USA. Since his containerised shipments will probably move successively by road, sea, rail, and road, while his US competitors shipments may enjoy a simple movement by road, an efficient system of communication is called for between factory and overseas representative. It is to the latter that the follow-up man will look for delivery information, and the overseas representative must be in a position to anticipate problems of supply before they arise, and to originate any possible remedial action.

This factor, coupled with the high volume of production involved, means that overseas suppliers most likely to succeed in the OEM market will be those having sufficient resources to set up a local operation in selling and supply, capable of competing on equal terms in this most competitive of all selling operations. The OEM market is not for beginners in exporting, and is best suited for those firms who are already major suppliers to the British auto manufacturers—preferably to subsidiaries of the Detroit parent companies; who have experience in hard selling in fiercely competitive conditions; who have strong background in expediting export orders, and whose record for reliable productivity can be substantiated. These demanding requirements do not mean that the OEM market should be written off. A number of British firms have already achieved a degree of success in it, and it has a potential for quantity business which can be very attractive. The Japanese parts manufacturers are currently much interested in it. As one of them put it recently, 'The original equipment parts market is a prime target for Japan. Once you get the business, production flow and inventories are relatively constant'.

Probably the best starting point for a British supplier of OEM parts who feels qualified to tackle the US market would be American Motors Corporation, whose present volume is substantially lower than that of the 'Big Three', or one of the independent builders of trucks (commercial vehicles), special purpose 'off-the-road vehicles', or recreational vehicles. All of these have production schedules which, while low by US standards, could represent useful business volume for a British supplier. Examples of items in which such customers are likely to be interested are castings (axle casings, gearboxes, flywheel housings, transfer cases), forgings (truck front axle beams and crankshafts), and leaf springs.

Another useful channel by which British suppliers are able indirectly to enter the OEM market is through US manufacturers of OEM items, a number of whom are themselves actively seeking overseas sources of supply for 'bought outside' components which they incorporate in their products. One such manufacturer, having annual sales of three billion dollars is currently investigating overseas procurement of forgings, castings in grey, malleable and ductile iron in sizes from one to thirty pounds, moulded rubber products, screw machine components, coil springs of various sizes, and alloy steel in bar form.

The 'aftermarket', which consists of replacement spares and accessories, is a large one in the USA. The two types of buyer are the automobile manufacturer who supplies branded 'genuine replacement' parts to dealers throughout the country, and the independent manufacturer producing (and frequently merely merchandising) replacement parts for a variety of cars through distributors supplying garages, service stations, etc. The automobile manufacturer is likely to place orders for service parts with the supplier who produced them for the current model year and who therefore has the tooling, but the independent manufacturer is sometimes a good prospect for



General Motor's Technical Centre in Warren, Michigan, Research Engineering, and Styling headquarters for America's No. 1 manufacturer.

Ford's Rouge complex in Dearborn, Michigan, the world's largest integrated manufacturing and assembly plant.

the overseas supplier. Earlier this year a Detroit corporation, formerly a major OEM supplier, announced its intention to leave the OEM market to its overseas competitors who had eroded the market for its own specialty product line, and to enter the aftermarket with a wide range of replacement items for imported cars and a limited range for domestic cars. The former included engine bearings, pistons, piston rings, valves, liners, gaskets, fuel pumps, carburettors, ignition components, brake components, universal joints, filters and water pumps, while for US cars the list consisted of water pumps, universal joints and filters. Several British manufacturers are in negotiation to supply this project.

British companies with appropriate products who believe that they could meet the demanding terms of doing business with the US auto-makers are advised to first contact their nearest Regional Office of the Department of Trade and Industry and explain that they would like the post in Detroit to make a preliminary assessment of their prospects. The following items are an essential minimum in the data to be supplied if serious consideration as prospective suppliers is to be given by the auto firms:

1. Vendor's name, address and telephone number. Name, address and telephone number of local representative, if applicable.
2. Date established.
3. Size of plant(s)
4. Number of employees.
5. Principal products.
6. Location of plant(s).
7. Description of production facilities and equipment.
8. Approximate yearly sales volume.
9. List of three representative customers.
10. Financial and credit rating.

Supplementary information in the way of catalogues, photographs, brochures, company reports etc., is also useful. The Regional Office will forward the inquiry to Detroit through the British Trade Development Office in New York, and the post will then carry out a limited initial check on the British firm's chances of doing business.

It should be emphasised that this first survey is nothing more than an attempt by the post to give guidance on whether there is any point in going further with the idea, and is bound to be subjective and not definitive. However, the post has on its permanent staff Consul (Commercial) Mr. E. W. Busby who had many years of practical experience in selling to the motor industry in North America, and Vice-Consul (Commercial) Mr. K. H. Vollans who had long experience in the tractor and special purpose vehicle business. Both officers have a wide range of contacts in the automotive and associated industries, and among agents, manufacturer's representative's and purchasing officers who are well qualified to express judgement with some confidence on an overseas suppliers product line, and its chances in this market.

If the initial reaction is reasonably favourable it will then be for the United Kingdom manufacturer to decide whether to send a representative to Detroit (possibly as part of a suitable mission to North America) to follow up the post's preliminary survey by his own investigations on the ground. The post can assist by setting up appropriate exploratory interviews with purchasing departments, manufacturers representatives, and agents. If the prospect still looks promising, the British manufacturer will need at this point to seriously consider appointing an agent. Only in most exceptional circumstances is it possible to do business in this field without a resident agent who knows his way around the industry and is familiar with the whole mechanism of selling to automotive firms. The post can assist here with introductions to suitable people. Good agents in this type of business do not work for nothing, and, unless the British firm has a really hot short-term prospect in its product, consideration will have to be given to the payment of some sort of retainer during the trial period.

At this stage the British firm should then assess, with the guidance of its agent, whether the time is right to participate in the British joint venture exhibit at the Society of Automotive Engineers annual show and conference which is held each January at Cobo Hall, Detroit. This exhibit is sponsored by the Society of Motor Manufacturers and Traders, and the North American Executive, Mr. W. S. Cottrell, can furnish details of the conditions of participation.

After that it is a question of a lot of hard work, a fair amount of expense, and a bit of luck. It is not a market for faint hearts, or for companies who do not feel qualified to meet the pressure of deadlines or rigid specifications, but for firms who can meet the challenge the possibilities are considerable.

Chief Executive for Trade Board

THE Chairman of the British Overseas Trade Board, Lord Thorneycroft, has announced the appointment of Mr. J. S. Rooke, Minister (Economic) at the British Embassy in Paris, as Chief Executive of the Board. Mr. Rooke, who will take up his post in London during November, brings to it a wide and varied experience in the service of British overseas trade.

Born in Cumberland in 1916, James Smith Rooke took first-class Honours in German and French at London University, where he also got his rugby colours. In 1938 he joined HM Foreign Service where he chose the commercial diplomatic branch and served initially in the Department of Overseas Trade in London.

Shortly after demobilisation from war service with the King's Royal Rifle Corps and the Army Educational Corps, Mr. Rooke was appointed to the British Embassy in Bogota, and later joined the United Kingdom delegation to the International Trade Organisation Conference in Havana.

His next move took him to Germany to establish UK commercial diplomatic representation at Frankfurt, then to Bonn before being posted to the commercial department of the British Embassy in Rome. After a spell at Milan Mr. Rooke was promoted to become Deputy Consul-General (Commercial) at New York. He later served as Counsellor (Commercial) in Berne and then Rome, moving on promotion to Canberra as Minister (Commercial) before his appointment to Paris in 1968. As Minister (Economic) there he was appointed Director of the Suez Finance Company as HM Government's representative on the board.

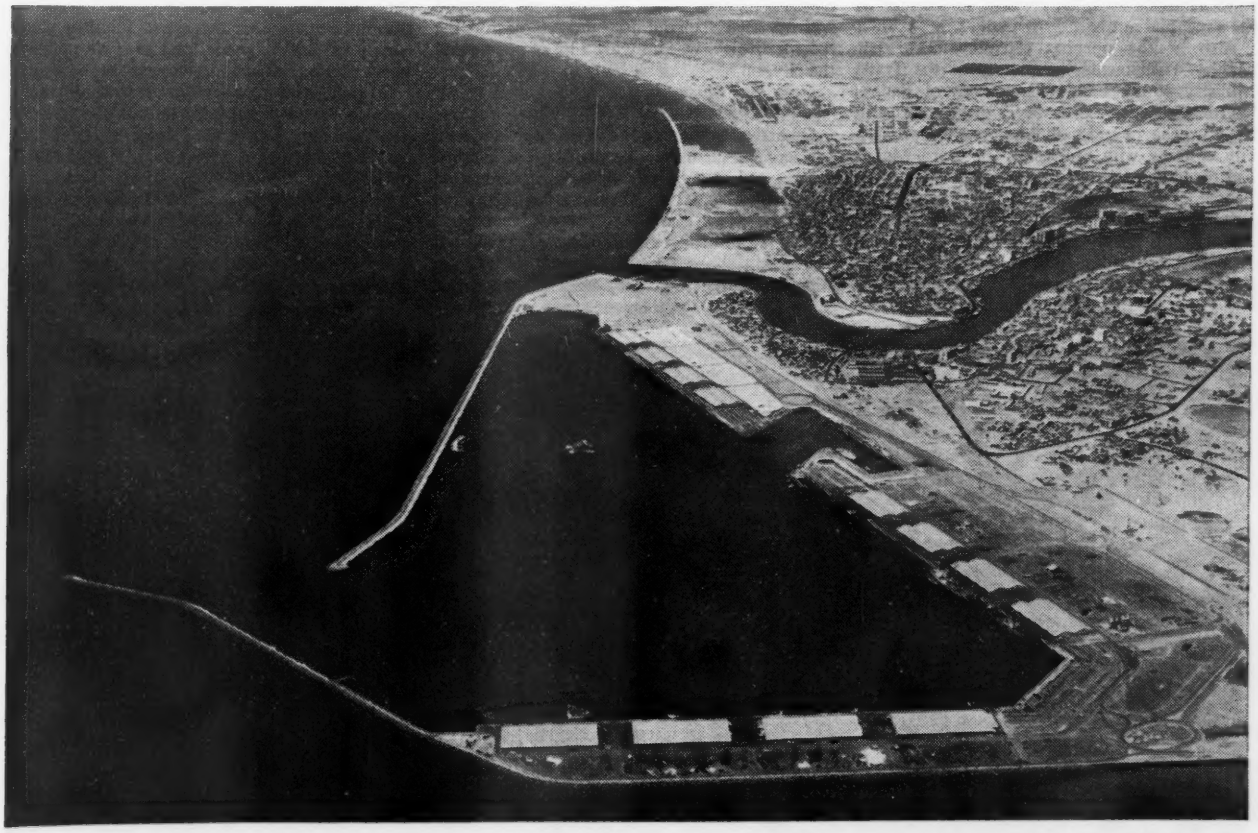
Mr. Davies at Copenhagen seminar

MR. John Davies, Secretary of State for Trade and Industry, is visiting Copenhagen today, October 12. Mr. Davies has accepted an invitation to attend a Seminar on Invisibles arranged by the British Import Union in Copenhagen as an important feature of this year's British Trade Drive in Denmark. Mr. Davies will also speak at a dinner to be given in the evening. During the day Mr. Davies expects to meet Danish Ministers. He will be guest of honour at a luncheon given by Her Majesty's Ambassador, Mr. Andrew Stark; the guests including Mr. Erling Jensen, Danish Minister of Commerce.

The Invisibles Seminar is being organised and financed by the British Import Union (BIU), with the support of the DTI. The BIU is an association of Danish businessmen formed in 1930 whose common interest is the furtherance of good Anglo-Danish commercial relations and in particular the promotion of British exports to Denmark. The BIU has played an important part in the arrangements for British trade promotional activity in Denmark for many years.

About 100 leading Danish businessmen are expected to attend the Seminar including representatives of banks and insurance houses. A panel of British experts drawn from the City of London and headed by Mr. Charles H. Villiers, chairman of Guiness Mahon and Co. Ltd., the merchant bankers, will lead the proceedings. Papers will be delivered on commercial and merchant banking, insurance services, leasing, factoring and British commodity markets and exchanges.

Britain is staging the Trade Drive in recognition of the importance of the Danish market—Denmark purchased £232 million worth of goods from Britain in 1971 and was its thirteenth largest overseas market. A series of consumer goods events, attended by the Duke and Duchess of Kent, took place in April/May. Capital goods events, including the Invisibles Seminar are being staged this autumn.



British designed and constructed, Port Rashid, Dubai—the Middle East's largest man-made harbour—was officially opened last week, 15 months ahead of schedule. The ceremony was performed by the Ruler of Dubai, Sheikh Rashid Bin Said Al Maktoum. The £24 million port with 15 deep-water berths was built by Costain Civil Engineering Ltd., and designed by London consulting engineers Sir William Halcrow and Partners. Much of the financing was through London banks headed by Lloyds, with ECGD backing. Work has also started on an underwater tunnel linking the towns of Dubai and Deira—to be built by Costain to the design of Halcrows, and bringing the total value of work won by Costain in Dubai to over £45 million.

Stuttgart shopping week reinforces South German Trade Drive

by John Parker, British Overseas Trade Board

'THIS is the chance for the German man in the street to see what Britain has to offer.' So said the Earl of Limerick, Parliamentary Under-Secretary of State for Trade at the Department of Trade and Industry, when he opened the British Shopping Week in Stuttgart.

The Week, which was mounted by DTI's Fairs and Promotions Branch under the direction of the British Overseas Trade Board, opened in bright sunshine and ran from September 29 to October 7. During the Week the people of Stuttgart, a city with some 700,000 inhabitants, flocked to the decorated shops to see for themselves and to buy.

Historical links

Britain, Lord Limerick said, had historical links which had developed trade with north Germany and the Rhineland. 'South of the Main we are less well known, and one of the objects of this Trade Drive is to demonstrate clearly my country's interest in the south German market,' he said. Despite the emphasis on capital goods, Lord Limerick said, the interests of the man in the street had not been forgotten.

Also at the opening ceremony were Dr. Mahler, Parliamentary Secretary of the Trade Ministry of the Land Government of Baden-Wurttemberg, the Lord Mayor of Stuttgart and the Lord Mayor and Lady Mayoress of Cardiff, a city twinned with Stuttgart. The Lord Mayor welcomed the Week as a means of letting the people of Stuttgart know a little more about Britain and the goods and materials it produced. Among the guests was the newly appointed British Ambassador to the Federal Republic, Sir Nicholas Henderson.

The Earl of Limerick, Parliamentary Under-Secretary of State for Trade, writes:

There is no doubt that the British Shopping Week in Stuttgart has engendered an enormous feeling of goodwill. The co-operation by all concerned has been magnificent and one must pay special tribute to the Stuttgart city officials for all their help. Stuttgart has been British for a week—the South German Trade Drive is well launched, and now is the chance for British firms to follow up on the enthusiasm created.

Baden-Wurttemberg, of which state Stuttgart is the capital, and neighbouring Bavaria, contain one-third of the population of Germany. In Stuttgart it seemed that most of these 20 million were in town, and only possibly because the local Bad Canstatt Volksfest—a sort of an amalgam of Battersea, Blackpool and Margate pleasure gardens rolled into one and equipped with at least six enormous beer tents for the 'beer festivals'—was bringing a lot of people into the city.

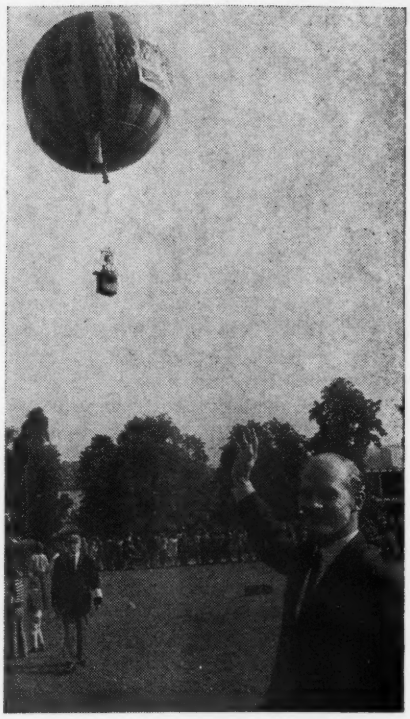
'Britische Einkaufswoche'

On arrival at the station they were greeted with banners proclaiming the Britische Einkaufswoche, and as soon as they crossed the station square they came into a sea of British flags and bunting.

Helping to attract the customers into the 100 stores and shops taking part was the Hawick Pipe Band. Wherever they went they attracted enormous crowds, whether marching along the main mile-long Koenigstrasse or playing in the stores. In the stores there was found a great variety of British goods, and over £¼ million-worth of products were on show on the counters.

Six policemen from Wales were present to help the promotion, speaking excellent German. A double-decker bus from Cardiff and another from London took shoppers for free rides round the city.

Thus the scene was set and the platform built from which to launch the promotion of British goods. There were many best-selling items from Britain, such as confectionery, biscuits, toys, men's clothing, whisky, hand-made shoes, jams,



The balloon goes up in Stuttgart's Schlossgarten as Lord Limerick helps launch the Shopping Week.

Crowds bustle outside one of the many fine window displays put on by Stuttgart stores.

Pipers from the Hawick Pipe Band entertaining crowds in Stuttgart's Kleine Schlossplatz where a display of British cars was held. The band marched down the mile-long Koenigstrasse, attracting large crowds, and played in a number of stores.

ladies' coats and tweed jackets. The Week helped to enhance and emphasise their presence and at the same time present some products not so well known—clocks, for example, in an area which is famous for its local industry (and with Switzerland only 70 miles away), musical instruments (one shop alone had £3,000-worth of British equipment), and costume jewellery, which proved to be very popular, as well as pottery and many other goods.

The Shopping Week was mid-way in the South German Trade Drive, itself mainly concerned with the promotion of capital goods. The Stuttgart event, which is to be followed by a similar but larger Shopping Week in Munich this time next year, is one of the highlights of the consumer promotions.

Breuninger department store, the Harrods of Germany, said that they had been most impressed by the co-operation they had received from the British Trade Drive Office in Stuttgart and by the quality and variety of display material available. They added that a Shopping Week done the British way was a tremendous boost to business and for British goods.

They were enthusiastic about the promotion, and among the goods they picked out as selling well were foodstuffs and clothing—about 70 per cent of the men's clothing they stock comes from Britain. Hertie, an important chain store which has two department stores in Stuttgart and over 60 throughout Germany, said that shopping crowds had greatly increased with the advent of the Week.

Confectionery and whisky sold especially well at a 'Good Things from Britain' stand. They had found that British firms had supplied in good time, and they were well satisfied with the products they had bought in.

Invisibles

Although the Shopping Week was concerned with the promotion of consumer goods and the Trade Drive as a whole with capital goods, the important third field of the invisibles was not forgotten. Two major banks featured displays: one was specially prepared by the Central Office of Information dealing with a theme of 'Inventive Britain' and the other showing the role of the Crown Agents in projecting Britain as a supplier of printed and minted currency for overseas Governments.

Tourism, too, was encouraged by the Travel Association in Stuttgart, as well as by the very presence of this minor invasion from Britain.

The Hertie store had a display of ancient royal costumes together with models of Tower Bridge and St. Paul's Cathedral. The Kaufhof group of stores featured a display of models of the Crown Jewels. Breuninger (the largest independent store in Germany) had working models of Rowland Emmet machines. A number of stores featured such things as painting crafts and knitting. There was an open-air display of British cars which included among the popular models many specialist vehicles.

The Trade Drive is now gathering momentum, and in the coming months there is a variety of extremely important Trade Fairs in South Germany. The Stuttgart Shopping Week, which was highly successful, was helped greatly by the willing co-operation of the city officials and store managements in Stuttgart and by the presence of the Lord Mayor of Cardiff.

Specialist anaesthetic goods attract notice at Kyoto congress

From the British Consulate-General, Osaka: The Technical Exhibition which was held with the fifth World Congress of Anaesthesiologists at Kyoto last month was notable for the size of the British representation.

Fourteen British firms took part in a joint venture organised by the British Hospitals Export Committee and the DTI; 22 firms from 10 other foreign countries exhibited, along with 40 Japanese companies. One other country exhibited as a national group but had only four booths. A national group as large as the British would have attracted attention even if it had not had so many first-rate products and techniques to display and a prime site on which to do so.

Two years ago the British Embassy in Tokyo earmarked 340 m². for the joint venture. Not only was this the largest site at the exhibition, but it was so arranged that all visitors using the main entrance had to pass between two files of booths, attractively designed by the Central Office of Information, before moving to the rest of the exhibitors.

Most of the British firms had Japanese agents already and knew the market well. Three firms who were new to the market and had no agents made use of the services of the Commercial Sections of the British Embassy in Tokyo and the Consulate General in Osaka to approach potential agents during their stay in Japan. By the end of the exhibition agreements were being negotiated.

There is a growing market in Japan for medical products and equipment of all kinds. Since many Japanese manufacturers are geared to mass production the advantage for a British manufacturer in competition with domestic equipment may often lie in being able to meet specialised requirements dictated by increasingly sophisticated or novel techniques in medicine and surgery.

Among the new items revealed by British exhibitors were a recently developed intravenous steroid anaesthetic and a twin-flow metered mixer unit to maintain automatically any selected oxygen percentage, together with a plug-in vaporisor system for a variety of inhalents.

Even to those already aware of the Japanese market the degree of interest shown in the British display was surprising. Also gratifying was the interest shown among the 2,000 anaesthetists from 80 other countries attending the Congress. By the time the British Ambassador, Sir Fred Warner, visited the British exhibitors all the 14 firms could report a large number of inquiries received and quotations given.

drilling & blasting . . . . is our business

With specialist staff and modern plant ROCK FALL operate in an international market . . .
ON LAND, OVER WATER & UNDERGROUND

- Drilling & Blasting for rock excavations in bulk and controlled form
- Shothole drilling for quarrying, mining and tunnelling
- Controlled explosives engineering for demolition, terrain clearance and foundations
- Exploration drilling and site investigations ● Water well drilling
- Special drilling requirements, including pile anchors, large diameters, etc.

ROCK FALL COMPANY LTD
DEALSTON ROAD, BARRHEAD, GLASGOW
Telephone: 041-881-2361/2/3.
Telex: 77504 Cables: ROCKFALL BARRHEAD

Send for descriptive brochure of ROCK FALL activities as
SHOTHOLE & EXPLORATORY DRILLING CONTRACTORS & EXPLOSIVE ENGINEERS FOR OPERATIONS ON LAND & OVER WATER

● Member of the Bos Kalis Westminster Dredging Group ●

Caravan-makers try to regain their share of German market

From the British Consulate-General, Dusseldorf: There is no doubt that the British caravan industry's image in Germany needs to be improved. From first place among the countries exporting caravans to Germany in 1968, accounting for 47.4 per cent of German imports, Great Britain had dropped to fourth place with only 9 per cent in 1971. Holland came first (37 per cent) followed by Yugoslavia (30 per cent) and Italy (14 per cent).

The appearance of 13 British exhibitors sponsored by the National Caravan Council in a first-ever joint venture at the 11th Caravan Salon, Essen, (September 16 to 24) was therefore most welcome, a sentiment expressed not only by the organisers of the exhibition but also by the many friends the British caravan industry has on the Continent and who are regular visitors to the Caravan Salon.

Many UK manufacturers have been represented loyally and regularly through their local agents and subsidiaries at this exhibition ever since its inception, but the strengthening of this representation by an officially supported joint venture showed a re-awakening interest by manufacturers themselves in this rich and still rapidly developing market.

Joint-venture exhibitors displaying caravan heating, lighting, sanitary and trailer equipment, and a firm offering transportation services all reported good results and the prospect of some large orders. These firms exhibited alongside the manufacturers of touring caravans on a very attractive stand with a large backdrop of a woodland scene in one of the main halls.

Because the demand for space far exceeded what was available in the exhibition halls, the committee organising the exhibition decided that static, residential caravans known in Germany as 'mobile homes' would have to be shown on open spaces between the halls and on a large car park in front of the main entrance. This is a sector in which the United Kingdom has a definite lead, and many British manufacturers were represented among the exhibits. Of these, two were joint-venture exhibitors.

The first two rain-soaked days of the exhibition were very disappointing for these firms, but for the last six days their spirits were raised by sunshine and improved attendance at their stands.

Now well established

The Caravan Salon is now well established as a major European exhibition frequented by all the dealers and manufacturers in Germany and many from neighbouring countries. Altogether there were 106,200 visitors, a record to date; 170 exhibitors from 13 countries showed 700 models in an area totalling 67,000 m² in the 12 halls and on the areas in the open.

No startling novelties in design or construction were observed. The trend is obviously towards larger caravans to be used for weekends and local holidays—second homes, in fact. Germans are demanding more spacious interiors and more luxurious fittings, and their decisions to buy are weighed as much by quality as by price. Automatic reversing equipment and, on the larger caravans, twin axles are practically standard fittings.

British caravans, built to a price more than are their German equivalents, do not show to such advantage and British exhibitors recognised that they will have to make modifications to models when they are offered on the German market. Nevertheless a good start has been made.

British exhibitors expressed their satisfaction with the contacts they had made and the information they acquired. With these contacts and this information to build on, they expect to be able to recover some, at least, of the ground the British caravan industry has lost. All of the British exhibitors intend to be back in Essen in 1973 when the Caravan Salon will be held from October 13 to 21.

British joint venture at the Caravan Salon, Essen.

Intense competition among cattle-breeders at Italian fair

From the British Consulate-General, Milan: Intense competition between various dairy cattle-breed organisations of several countries —including Britain, the USA, Canada, Holland, West Germany and France—marked this year's Cremona Fair at the end of September. It has now come to be regarded as Italy's premier dairy cattle show and has gained rapidly in significance as an essential component of the international agricultural exhibition scene.

In a highly successful joint-venture participation by the British Friesian Cattle Society and the Department of Trade and Industry, ten cows of impeccable pedigree were shipped out to Cremona by air by the British Livestock Company Ltd. acting as agents for the Society.

They took part in the cattle exhibitions held in special standings separate from the commercial exhibits of agricultural machinery and ancillary equipment put on by local manufacturers' agents. The British cattle attracted such interest among Italian breeders that they were all sold before the actual exhibitions were opened.

Considerable enthusiasm was shown, too, about the British pavilion, designed on classically simple open lines, and incorporating lounge accommodation hard by the cattle standings. The award of a cup by the fair authorities to the British exhibitors put the seal on the operation which could well be emulated by an increasing number of British cattle exporters in future years.

Letter to the Editor

Thanks for Joint Venture

I HAVE read with interest the report from the British Trade Development Office in New York on the New York National Hardware Show which you published on page 495 of your September 21 issue.

My company has participated at every DTI Joint Venture scheme sponsored by the Federation of Horticultural Exporters since its first event in 1966, and this has helped us no end to build up an export business amounting to approximately US $750,000 per annum to the North American market for our specialised products of outdoor furniture.

Well over 55 per cent of our production is now being exported to more than 70 countries, but a very high proportion is being shipped to North America and primarily the United States. Considering that our company employs only 130 people, we feel that we have achieved a lot since 1961 when the company was formed. We are quite proud of our export achievements, and also very grateful to the Department of Trade and Industry for the considerable help and encouragement they have given to increase our exports even more.

We have always faced considerable competition from European and Japanese manufacturers, but were able to meet and beat this competition by offering high-quality merchandise having exclusive features and also giving first-class service.

It was therefore very disappointing suddenly to be faced by new and what appeared to be very unfair competition from some countries, and exceptionally low prices quoted by manufacturers from those countries have greatly upset the market for our type of merchandise, and the Japanese and Continental manufacturers are equally perturbed.

However, although being disappointed we are by no means defeated and were able to conclude some sizeable contracts during the show, and in fact I came away from the exhibition a little bit more cheerful than I was when I spoke to officials from the Trade Development Office in New York.

A large number of important Canadian buyers also visited the Show as in the past years, and I am glad to report that an order for approximately $50,000 was successfully negotiated. This was with a new Canadian customer with whom contact was made at the exhibition. Special samples were flown to Canada five days after the Show closed and we concluded the deal in London a short while afterwards when the buyer whom we met at the Show came to Europe.

Had we not participated at the New York Show this order would not have been obtained, and this illustrates once again how important it is for British manufacturers to participate in overseas exhibitions.

I would like to take this opportunity of thanking the Department of Trade and Industry for the assistance given not only to our company but also the other participants at the National Hardware Show, and we all greatly appreciated the help the British Trade Development Office in New York once again extended to us.

F. W. Odell,
Managing Director
L. E. Gant Ltd.,
Richmond, Surrey.

Good business at Frankfurt Automechanika

From the British Consulate-General, Frankfurt: More than 52,000 visitors from 44 countries attended the second Automechanika which took place in September in Frankfurt, and covered a total exhibition area of well over 50,000 m².

Almost 600 exhibitors, some 135 of them foreign from 17 countries, displayed their latest products in the fields of motor-vehicle equipment and accessories, workshop and service-station equipment and machinery.

Electronic and computerised engine-testing instruments were strongly featured at this show, and there was particular stress on equipment and accessories which contribute towards greater safety and comfort in motoring.

It was very evident that examples of the latest testing and servicing equipment for motor vehicles were being closely examined by trade buyers from the labour-saving and cost-effectiveness points of view.

For the first time at Automechanika, the DTI sponsored a joint venture in collaboration with the Society of Motor Manufacturers and Traders Ltd. Twelve British firms participated, displaying among many other things special accessories for European cars, rubber mats, special exhaust systems, safety equipment for children in cars, and repair tools, equipment and materials.

Many of these British firms were already well introduced to the German market, and some already had firmly established connections with agents or direct customers.

Those firms, however, who had not previously exported to the Federal Republic were pleased to find that their products evoked considerable interest among German buyers, and by the time the exhibition ended they had not only taken substantial orders but had also made contact with numerous German firms who were interested in becoming their agents.

One exhibitor of special car vizors was approached by no less than six German firms who were anxious to take on the agency for his product in the German market.

British exhibitors reported that they had received orders and serious inquiries for their products not only from German buyers but also from visitors from countries as far apart as Canada and Japan, India and the USA. The number of trade visitors from East European countries including Hungary, Yugoslavia, Poland and Romania was also noteworthy.

There can be no doubt that the international, and particularly the German, market for motor-vehicle accessories and for safety equipment continues to grow (the ever-increasing number of new car registrations is evidence of the way the market is expanding), and it was evident at this exhibition that those British firms who participated were fully aware of the future export possibilities, which will in any case be enhanced by United Kingdom entry into the EEC.

British joint-venture exhibit at Frankfurt's second Automechanika.

So good at the fair

'We booked about £10,000 worth of orders, appointed two agents to cover all our product groups, and came away thoroughly happy and contented'. This direct quote comes from a letter received by the British Overseas Trade Board's Fairs and Promotions Branch from Mr. S. J. Isitt, group export manager of the Dreamland Group. The letter follows Dreamland's participation in the Joint Venture at the Helsinki International Trade Fair for Consumer Goods, held from September 15-24, where Dreamland showed electric blankets.

Joint venture succeeds at Montreal footwear show opened to foreign makers

From the British Government Office, Montreal: A new name for the old-established Canadian Shoe and Leather Fair was adopted for the 1972 show as a result of the decision to open the show to importers and overseas manufacturers not previously admitted. The first Montreal International Footwear Exposition was held in the Place Bonaventure Exhibition Hall in downtown Montreal from September 23-25.

British footwear manufacturers have in fact exhibited under BOT/DTI joint venture since 1966, when the much smaller show was held in hotel bedrooms.

This time eight British manufacturers and the British Footwear Manufacturers Federation occupied individual booths designed by Fairs and Promotions Branch, DTI, and constructed of bedlock units, within a gross area of 2,400 sq. ft.

The overall design was functional and attractive, and took full advantage of the excellent location adjacent to one of the main entrances to the hall.

All the British exhibitors expressed satisfaction at the results they obtained by exhibiting. The old hands, such as Start-Rite Shoes Ltd., and B.S.C. Footwear Supplies Ltd., still find their continued participation essential for meeting existing and new customers, while newcomers to the show such as Morlands and Bozeat Boot Co. Ltd., were able to make new contacts hoped to lead to substantial business.

Another important result of participation was the opportunity to appoint distributors. Messrs Dunkelman and Son Ltd., as a result of contacts made appointed distributors in Ontario, Quebec and British Columbia for their footwear accessories.

In the joint-venture display there was a wide range of British products, consisting of—sheepskin boots and slippers, rubber footwear, soccer boots and other athletic footwear, work boots, fashion shoe accessories, clogs and wooden platform units, in addition to the men's, women's and children's shoes.

Other British footwear, mainly men's leather boots and shoes, was also exhibited on the stands of associated Canadian manufacturers and footwear agents/importers, but the major portion of the British products were in the joint-venture display.

The IMEX train reached the first of its nine provincial stops last week—Nottingham, where the Lord Mayor, Mr. Charles Butler, opened the exhibition. He is seen here with Linda Cooper, Miss Government Statistics, Mr. W. Foyers, Nottingham chairman of the Institute of Marketing, and DTI's East Midlands Regional Director, Mr. E. T. Watson. This week the train —carrying information to exporters—is at Bristol, and next week's stop is Birmingham Moor Street Station.

Established French

The extension of the show facilities on an international basis resulted in a much stronger display of imported footwear than in former years. In addition to the French footwear-manufacturers, who are established exhibitors, there were national exhibits by Romania (Arpimex), Austrian Exporting, the Colombian Trade Development Bureau, and Skorimpex of Poland. Most of the imported footwear, notably women's shoes, from Italy, Spain and Brazil was, however, located on the stands of Canadian importers and in some cases manufacturers.

Canadian manufacturers of footwear and supplies to the footwear industry occupied the bulk of the 150 or so stands in the main exhibition hall. Additional exhibits were to be found on another floor of the Place Bonaventure where the permanent footwear tenants had showrooms.

The Canadian footwear industry expressed optimism about the future, but this was based on hopes of increased government protection in the form of tariff barriers or a quota system against low-cost imports, plus incentives for restructuring the local industry, and not upon any overall upturn in the economy or increased demands for footwear products.

SAY THE FAR EAST TO ALITALIA AND THEY'LL CALL YOU A NAME OR TWO!

Bangkok
Bombay
Djakarta
Hong Kong
Karachi
Kuala Lumpur
Manila
Melbourne
New Delhi
Singapore
Sydney
Tokyo

Far East DC-8/62F
all-cargo service: weekly
to Tehran, Bombay, Bangkok,
Hong Kong and Tokyo.

Far East Passenger/Cargo
services: frequently to
Bangkok, Bombay, Djakarta,
Hong Kong, Karachi,
Kuala Lumpur, Manila,
Melbourne, New Delhi,
Singapore, Sydney, Tokyo.

Call your forwarding agent
or Alitalia in
London (01-897 0491),
Birmingham (021-742 1414),
Manchester (061-437 8126),
Glasgow (041-248 6340)
or Dublin (775171)

Flights in association with Air France, Lufthansa, JAL.

Alitalia
CARGO SYSTEM

Mr. Brezhnev and Mr. Kosygin precede buyers to British agricultural stands

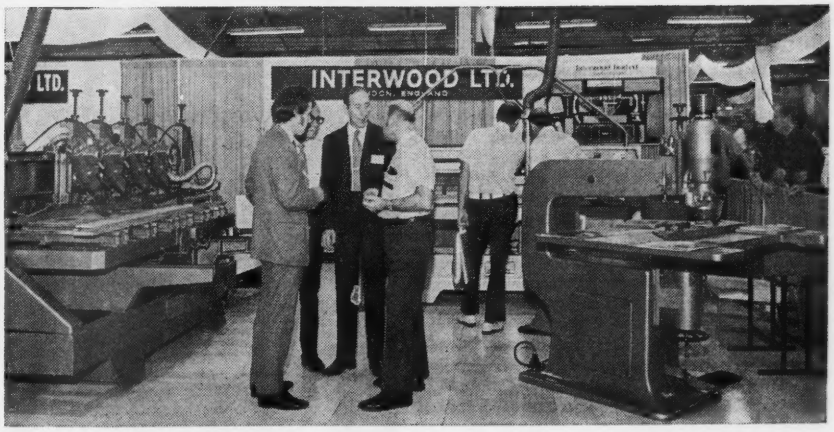
From the British Embassy, Moscow: Twenty-one British firms participated in the international exhibition Modern Agricultural Machines and Technology (Sel'khoztekhnika '72) in Moscow in September. The British Agricultural Export Council and the Department of Trade and Industry, joint organisers of the British pavilion, were both awarded gold medals by the Soviet authorities.

Most of the British firms taking part were well satisfied with the interest which they had aroused and the contacts made, and £150,000-worth of exhibits were sold from the stands. Several companies are now discussing major long-term business possibilities, including licence arrangements, with USSR customers.

The British pavilion was visited by the Ambassador, Sir John Killick, who personally welcomed a Soviet Party and Government delegation including Mr. L. I. Brezhnev, general secretary of the Central Committee of the CPSU, Mr. A. N. Kosygin, chairman of the USSR Council of Ministers, Politburo members M. I. Suslov and D. S. Polyanski, the Minister of Agriculture, Mr. V. V. Matskevich, the Minister of Tractor and Agricultural Machinery Building, Mr. I. I. Sinitsyn, the Chairman of V/O Soyuzsel'khoztekhnika, A. A. Ezhevski and other officials, who then toured the stands. The Ministers directly concerned, and their staffs, visited the British pavilion on several occasions.

Export Council chairman Sir Rudy Sternberg visited the exhibition and gave a reception in the British pavilion for Soviet contacts. He also had meetings with Mr. Kosygin, the Chairman of the Council of Nationalities of the Supreme Soviet, the Chairman of V/O Soyuzsel'-khoztekhnika, the Minister of Agriculture and several others.

At these meetings further possibilities for co-operation between Great Britain and the USSR in the fields of agriculture and agricultural engineering were discussed.



Mr. R. D. Farmer, director of Interwood Ltd. (left), and Mr. H. C. Blackborrow discuss business on the company's stand at the Louisville woodworking show.

Woodworking-machine makers do well at Louisville

From the British Consulate General, Cleveland, Ohio: Ten British companies took part in a Joint Venture sponsored by the Machine Tool Trades Association and the DTI at the International Woodworking and Furniture Supply Fair held in Louisville.

This bi-annual fair is now sponsored by the Woodworking Machinery Manufacturers Association of America and the National Association of Furniture Manufacturers. It attracts exhibitors from 13 foreign countries. Over 500,000 sq. ft. of floor space was used and companies were exhibiting the latest woodworking machinery including, for the first time, computer-controlled machines. A diverse range of products for supply to the furniture industry were also shown.

The British exhibits had much attention, and over $250,000 worth of orders were taken during the five days of the exhibition. R. S. Brookman Ltd. exhibited five types of machines that ranged from a 25-spindle dovetailer to a chair-seat borer. Joseph Gillot and Sons Ltd. and Pirelli Ltd. showed casters and chair suspensions respectively, while Interwood Ltd. had a display of their routing and V-grooving machines. JKO Cutters Ltd. exhibited two trimming machines as well as a haunching machine and spindle unit. Thomas Robinson and Sons Ltd. achieved a sales potential of $60,000 from their exhibit of band resaws incorporating return feed devices. Rye Machines Sales Ltd. sold their exhibits of mortising and edge-banding machines worth $40,000.

Spear and Jackson Ltd. had a display of their cutting tools. Thomas White and Sons Ltd., displaying sanders and rip-saws, sold two machines worth over $16,000. Wadkin Ltd. had a large stand on which they exhibited a planer and moulder, mortiser, cut-off saw and jointer. Their exhibit aroused a lot of interest, and the company received inquiries about $120,000 worth of equipment.

The Fair, sub-titled 'Impact '72' lived up to its name, and all exhibitors are looking forward to consolidating the interest aroused during the exhibition and to the 1974 exhibition.

MISSIONS and TOURS

Scientific instruments mission to Japan

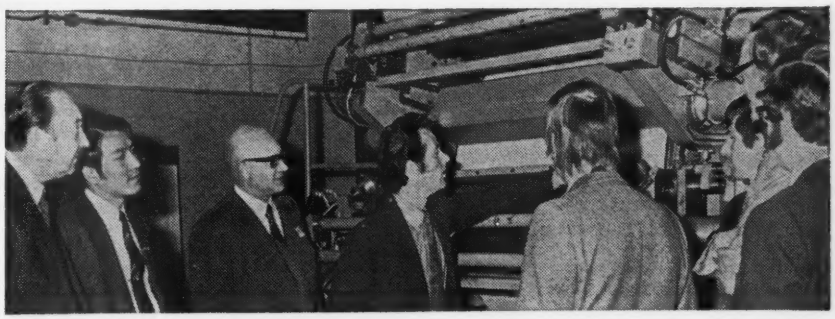
MR. David Wilson, Far East manager for Pye Unicam, Cambridge, has been chosen to lead the 1972 British scientific instruments trade mission to Japan this month. The mission, which leaves England on October 21, will spend 20 days in Japan promoting the sale of British-made scientific instruments. It is organised by the British Scientific Instrument Manufacturers' Association.

Nine companies will be represented. The Association's experience is that the selection of an agent and the establishment of good accord with him are especially important in the Japanese market. Companies which have devoted sufficient resources to the promotion of products carefully selected for technological content and high standard of performance have recorded successes in the territory. The support being given by SIMA member companies to the mission indicates the importance attached to the market.

Thackrays' drive in North America

CHAS. F. Thackray Ltd., the Leeds-based manufacturers and distributors of surgical and medical instruments, implants and one-time-use products, are planning to become nationally known in North America.

Spearheading this drive is Mr. John Thackray, grandson of the Leeds chemist who founded the company 70 years ago. He is the firm's marketing director, and he set out on September 25 to spend five weeks in USA and Canada. During his stay there he will have talks with leading American and Canadian surgical and medical equipment makers and distributors, some of who sell their products in Britain and the Commonwealth through Thackrays.



Mr. Mike Rogers, one of Strachan & Henshaw Ltd.'s salesmen, explaining the printing unit on their latest model 1200 six-colour common-impression printing press to a group of overseas agents attending a training course at the Speedwell plant. The course lasted almost a week and included lectures, discussions and practical demonstrations of all facets of the company.

Engtrade 19 trade mission to South Africa

WITH 18 trade missions completed successfully bringing back orders worth more than £36 million, the Engineering Industries Association has sent off another mission to South Africa.

The mission consists of 20 firms from all parts of England marketing a wide range of engineering products. These include machine tools, small tools, gauges, marine propellers, measuring and winding machines, cable lashing machines, pumps, mining tools and equipment, heat treatment plant, fasteners, industrial jet equipment, liquid strainers for the paint industry, bandsaws, scientific instruments, embossing rollers, fork-lift trucks, office furniture, hydraulic aerial platforms and special steels.

Engtrade 19 left London on October 7, under the leadership of the Director of EIA. It is supported by the DTI.

Large machine-tools party heads for Japanese tour

THE 28 members of the Machine Tool Trades Association who leave London on November 10 will be one of the largest outward missions ever organised by MTTA. The party, jointly sponsored by MTTA and DTI, will be away just under three weeks seeking new footholds for British machine tools in Japan and consolidating links with sales agents.

Opportunity will also be taken to visit the International Machine Tool Fair in Tokyo from November 15 to 26, where six UK machine-tool and associated equipment manufacturers will be showing their products.

The mission will be headed by Mr. Peter Catmur, managing director, Catmur Machine Tool Corporation Ltd.

Woman export sales manager sets out on two-month tour

MRS. Pat Beckett, export sales manager to the Imperial Machine Co.—the Croxley Green industrial catering equipment makers—perhaps the only woman export sales manager in the UK catering business, leaves next week on an extensive tour of Europe, Australia, and the Far and Middle East, which will take until December.

Mrs. Beckett's first port of call is Paris, where she is to attend Imperial's first overseas sales conference, before going on to Frankfurt for the Hotel and Restaurant Trade Fair. Imperial is one of a group of British manufacturers mounting a joint stand under the auspices of the DTI.

Mrs. Beckett then leaves for Australia where she will be visiting agents in Brisbane, Sydney, Melbourne, Adelaide and Perth before flying on in mid-November to spend a few days each in Djakarta, Singapore, Hong Kong, Beirut and Nicosia.

A party of restaurant proprietors from Paris attack the bagpipes on a visit to Arthur Bell and Sons Ltd., Scotch-whisky distillers in Perth. This visit was arranged by Bell's distributors in France, Carmona Distribution, Paris. During their stay the party visited Bell's blending and bottling establishment at East Mains and also the company's Blair Athol distillery at Pitlochry.

Tenth mission to Moscow

THIS week Mrs. H. P. Waudby led the tenth mission to Moscow from the Leicester and County Chamber of Commerce and Industry.

The mission is concerned with a varied range of Leicester products from capital equipment, such as numerically controlled machine tools, goods for industry, such as steam traps and valves, pipeline equipment, do-it-yourself equipment like vigro-engraving tools and paint sprayers, and consumer goods traditional to Leicester.

Turkish trade union delegation

SIX members of the Public Services Employees Union of Turkey on a visit to the United Kingdom as guests of the General and Municipal Workers' Union recently spent the day at the Howard Rotavator factory at West Horndon, Essex.

The visitors, accompanied by officials of the GMW, were greeted by Mr. Jonathan Harrison, managing director of the company.

American, South African and European visits follow exhibition inquiries

SIX Gullick Dobson sales engineers have left on individual visits to the Americas, South Africa and Western and Eastern Europe, following firm inquiries for the company's powered roof support systems received at the International Mining Exhibition staged last month at Olympia, London.

During the seven-day exhibition, Gullick Dobson Ltd., the Wigan-based company of the Dobson Park Industries Group, received visitors on their stand from mining organisations from 22 countries and are confident that tenacious sales follow-up will result in a number of orders to add to their successful record in overseas markets so far this year.

One of the Gullick Dobson export sales mining engineers flying to the Americas, where the company's products are currently operating on 17 longwall faces, will visit during his tour a mine near Colorado where Gullick Dobson are installing 4/500 (US ton) supports which have been developed specifically for the American coal mining industries. Exports obtained by the company in the USA since February total over $5.5 million.

The company has supplied roof supports to most of the coal producing countries of the world, including Russia, Japan, Germany, France, South Africa, Australia and Canada. The first powered roof supports for Hungarian mining operations were also supplied by Gullick Dobson and under a recent contract the company became the first to mechanise soda ash mining in America.

Pickfords International crosses Channel on big sales drive

UK/Continent freight-transport services on a greatly increased scale are foreshadowed by visits to Rotterdam, Antwerp, Paris, Dusseldorf and Stuttgart as part of an intensive drive now being undertaken by Pickfords International Ltd.

Pickfords International was set up as the focal point for all the National Frieght Corporation's international operations.

Jewellery mission to Canada

A PRESTIGE exhibition of British-designed jewellery and silverware organised by the Design and Research Centre for the Gold, Silver and Jewellery Industries is being staged at the O'Keefe Centre for the Performing Arts in Toronto. It opened on September 11 and runs to November 2. It is estimated that the display will be seen by over 200,000 members of the public.

The Department of Trade and Industry is supporting a mission of those designers and companies whose items are included in the O'Keefe Centre exhibition.

Monthly Digest of Statistics

Prepared by the Central Statistical Office in collaboration with the Statistics Division of Government Departments, this disgest is designed to provide industrialists and business executives with invaluable statistics relating to the economic situation in the United Kingdom. It contains a regular series of detailed statistics on a wide range of subjects which include the following: *Labour, Fuel and Power, External Trade, Wages and Prices, Industrial Production, Industrial Materials, Finance.*

Price **63p** (*by post* 72½p). Annual Subscription £8.60 including postage, and a copy of the Definitions of items and units employed in the Digest.

Government publications can be bought from the Government Bookshops in London (post orders to PO Box 569, SE1 9NH), Edinburgh, Cardiff, Belfast, Manchester, Birmingham and Bristol, or through booksellers

HMSO BOOKS

EXPORT ORDERS

Laings win big contracts in Spain

A £9.4 million contract to build 34 miles of trunk road in north-west Spain has been awarded to a joint venture of Laing Iberica, member company of the Laing Group, Ferrovial, and SACRA, a subsidiary of the Belgian company CFE.

At the same time other contracts worth nearly £2million have been awarded to Laing Iberica.

The largest of the latter contracts, worth £903,000, is for a 260-bed hospital at Ubeda for the Government health authority. On the northern outskirts of Madrid, the company have started work on a £387,000 home to accommodate 120 orphaned girls.

The road contract covers the Puebla de Brellon to Orense section of the proposed Galicia road network. This is a project designed by the Spanish Ministry of Public Works to give better access to the region above the border with Portugal.

The region has a difficult terrain for construction work with a high annual rainfall. Work will start in December and is scheduled for completion by April 1976. It is being undertaken by the same companies which are constructing the 65 mile (105 km) motorway on the north coast from Bilbao to Behobia.

Woodall-Duckham link with American contractors in £100m US gas projects

RECENTLY signed agreements between Woodall-Duckham and two separate US contractors, Bechtel and Foster Wheeler, have resulted in orders for five substitute natural-gas plants for large utility concerns in the United States. Total value of the five projects is some $100 million.

Woodall-Duckham's new links with these large American organisations form an important development in combating the USA's widely publicised energy shortfall. Many utility companies are making big investments in plant to make substitute natural gas from naphtha and it is to meet this fast-growing demand that the agreements were concluded.

Adcock-Shipley gain total US sales cover

MILLING-MACHINE manufacturers Adcock-Shipley are getting 100 per cent geographical sales coverage of the United States under a new agreement in which their machines will be sold through another Textron division, Bridgeport Machines.

The combination of existing Adcock-Shipley dealers and the formidable Bridgeport network will more than double the company's number of US outlets.

While dealers will hold a stock of spare parts and a small number of showroom machines, Bridgeport Machines Division of Textron Inc. will carry considerable back-up stocks at their headquarters in Bridgeport, Connecticut. As a result, Bridgeport plan to offer off-the-shelf delivery of an Adcock-Shipley miller throughout the USA.

Sperry wins £200,000 contract

SPERRY Marine Systems Division of Sperry Rand Ltd. has received contracts for the supply of Sperry Gyrofin ship stabilisation systems for two Spanish ferries which will operate between Barcelona and the Canary Islands. The orders, valued in excess of £200,000, were placed by Union Naval de Levante, Valencia for two passenger/vehicle ferries of 10,000 tons displacement, under construction by them for Trasmediterranea Cia of Madrid.

This is the first occasion that Sperry Gyrofin systems have been specified for either Spanish-owned or Spanish-built vessels, and the orders were achieved against stiff competition with the assistance of Aeromarine and Electronics Intl., S.A., Sperry's distributor in Spain.

Pullen pumps ordered for Cyprus hotel project

PULLEN Pumps Ltd., Surrey, have gained an order for pumps to be installed in the new Trust House Forte/BEA Golden Sands Hotel project, Famagusta, Cyprus.

The order, received from plumbing services contractor, Joannou and Paraskevaides Ltd., Nicosia, consists of a variety of pumps required to provide surface-water drainage, cold-water supply, garden watering, first-aid fire-fighting (hose reels) and primary fire-fighting hydrants, as well as cold-water supply for a separate pavilion building.

Two years and nine quotes later

MANY months of waiting did not dampen the spirits of Myers Brothers of Leeds who, in 1970, quoted for supplying chairs to the San Antonio Hotel at Lanzarote in the Canary Islands. The delay occurred when it seemed likely that all the furnishings in this new hotel would have to be Spanish-produced. Two years and nine quotes later a decision was reached, and this month 660 swivel chairs are being shipped to the Canary Islands. The chairs, which are required for the hotel's bedrooms, have low curved backs and are being supplied covered in a green-tweed fabric.

UN Africa study for British firm

THE United Nations have commissioned British consultants Transport Development Unit, to carry out a $64,000 study of tourism potential in Togo, West Africa.

The overall objective of the study is to assess the likely benefits which might be generated by an expanded tourism sector and to provide a phased programme for its development. Fieldwork starts in mid-October. The Final Report is expected to be completed by April 1973.

Pitney Bowes install line for new meter production

PITNEY-BOWES Ltd., the business equipment and systems company, has announced orders worth £800,000 for its new model 6300 postage meter. The orders for this British-developed machine were gained in the first few months of introduction, from both the UK and overseas, and increased orders are anticipated.

Mr. T. J. Gilligan, managing director of Pitney-Bowes Limited and vice president, Western European operations, said: 'To cope with the growth in demand for the new model, production will be raised 43 per cent. To do this an intensive factory programme is underway at our UK plant in Harlow, Essex, including the installation of a second production line to meet current orders and those expected for 1973.'

Since its introduction in late 1971 in the UK market, followed by release for export in March 1972, the low-cost model 6300 postage meter has been the most successful product launch in the 50-year history of Pitney-Bowes Ltd.

Simon-Vicars win £130,000 Peruvian order

FOR the modernisation and expansion of a biscuit-making plant in Peru, Simon-Vicars Ltd., Newton-le-Willows, are to supply equipment costing approximately £130,000.

The equipment will be installed at Sociedad Industrial del Sur's factory in Arequipa, 8,000 ft. above sea level in the Peruvian Andes. The contract calls for the design, supply and erection of dough-laminating and handling plant, automatic wafer-making plant, automatic cream-sandwiching equipment and mixing and cutting units.

Work has already started on the manufacture of the equipment, and the contract is expected to be complete by early 1973. The firm, Simon Engineering company, supplied equipment to the same factory 15 years ago.

Arvin Antigua contract

ARVIN Sales Ltd., St. Albans, have received an order from Antigua, West Indies, to supply the swimming pool surrounds of the Sugar Mill International Airport Hotel with their Arvin Dek-Lounger.

This is a recently introduced range of colourful all-weather chairs designed to supersede the wood and canvas deck-chair. It has a danger-proof adjustment mechanism which eliminates the trapped-finger hazards of deck-chairs. The modern design of the chair makes it ideal for use in hotels, clubs and private homes throughout the world.

The first British heavy commercial vehicles to be exported to the Central African Republic were formally handed over recently by Mr. P. F. Mulholland, chief executive of Telehoist Ltd. to Mr. A. K. Nydegger, a director of Wesimex Ltd., of Manchester, who placed the orders. The Telehoist tipping gears and bodies are fitted to Commer and Dodge chassis, supplied by Chrysler (UK) Ltd. Eighteen tipper lorries out of an order for 53 were handed over at the ceremony.

Restrictions on foreign investment in Australia

THE Australian Prime Minister, the Rt. Hon. W. McMahon, announced on September 26 certain new controls following the review of foreign investment policy by the Australian Government. The following is a summary of the points made:

Exchange control is imposed on short-term borrowings overseas.

The present sterling area exemption under which borrowings in Australian dollars from sterling area residents are not subject to exchange control approval is now terminated.

The guidelines laid down in May 1965 limiting the freedom of overseas owned companies to borrow in Australia are abolished.

The Australian Reserve Bank is shortly to announce details of a relaxation of the present policy on portfolio investment overseas by Australian residents.

The Government intends to legislate for the prevention of foreign take-overs which it considers would be against the national interest.

CRE ext. 2841/2319/2318

The New Zealand Minister of Industries and Commerce, the Hon. B. E. Talboys (right), with the Minister for Trade, Mr. Michael Noble, at the Department of Trade and Industry last week. The two Ministers had a brief discussion of trade matters.

Line of credit for Bulgaria: final date for contracts extended

THE Export Credits Guarantee Department and the National Westminster Bank Ltd. have agreed to extend to December 31, 1973 the final date for placing contracts under the £5 million line of credit for the Bulgarian Foreign Trade Bank signed in December 1970.

Contracts to be financed from the credit will as before be nominated by the Bulgarian Foreign Trade Bank, and access to it will be confined to ECGD Comprehensive policyholders unless the contracts would normally qualify for cover under a Specific Guarantee.

Two categories of goods are eligible: semi-manufactured metal goods, which qualify for 90 per cent finance, and a wide range of capital and semi-capital goods and associated services which qualify for 85 per cent finance. The paperwork for suppliers has been considerably simplified, particularly for contracts under £500,000. There is a minimum qualifying contract value of £5,000.

Exporters interested in this facility should contact Mr. I. Bonnett of ECGD (tel. 01-606 6699 ext. 7302) or Mr. D. S. Butler of the National Westminster Bank (tel. 01-606 1080 ext. 200).

Auto-Telex to Guatemala and Venezuela

TELEX users in the United Kingdom can now dial their own calls to Guatemala and Venezuela. Charges on the automatic service are £1.25p a minute for calls to Guatemala and £1 a minute to Venezuela, with a one-minute minimum. The three-minute minimum charge remains for calls placed through the operator.

The conversion of these two routes is part of a Post Office programme to reach all the world's major telex networks on automatic service by 1975. At present, 97 per cent of all international telex calls from the UK are dialled automatically; about 120 routes remain to be converted to automatic service, and the Post Office plans to do this as quickly as possible.

Applications for temporary exemption from import duty

THE Department of Trade and Industry is considering applications for the temporary exemption from import duty of the materials listed below on the grounds that these materials are not made in this country or the Commonwealth or the supply available from these sources is not substantial having regard to the existing United Kingdom demand.

Representations are invited from manufacturers in this country or agents of Commonwealth manufacturers who consider they are, or will be within a reasonable period, in a position to supply a substantial proportion of the United Kingdom demand for these materials, or who are interested in their future production.

Temporary exemptions come into effect on the operative date of the Treasury Order in which the materials are specified and normally continue until the end of the current calendar year, when they are reviewed.

Interested parties who wish to make representations should address them to Tariff Division, Department of Trade and Industry, Kingsgate House, 66-74 Victoria Street, London SW1E 6SJ, preferably through a trade association, giving the respective reference shown below and stating whether their names may be passed to the applicants for temporary exemption. Representations should be received by October 26.

Tariff heading	Proposed definition for tariff purposes	Applied for as	Exemption required until	Reference
29.25	Propachlor	α-Chloro-N-isopropylacetanilide	March 1, 1973	13033
29.39	Mestanolone	Methplandrostanolone	December 31, 1973	12977
58.02	'Synthetic grass', being a woven pile fabric with a pile of green, solution dyed, polyamide filament of not less than 60 decitex and a ground of polyolefin strip of heading number 51.02 impregnated with a synthetic rubber or artificial plastic material, and weighing not less than 1.8 kilogrammes per square metre	Tartan turf	December 31, 1973	12295

In many cases further information on the notices published on these pages is available from the Department of Trade and Industry. The main branches concerned are: Commercial Relations and Exports (CRE) Division, DTI, 1 Victoria Street, London SW1H 0ET (Tel: 01-222 7877); and Export Services Division (ESD) and Export Data Branch (EDB), both at DTI, Export House, 50 Ludgate Hill, London EC4M 7HU (Tel: 01-248 5757). In each case, the relevant information source is indicated at the end of the notice by its initials (CRE, ESD or EDB) and the appropriate telephone extension number. In the Tariff and Trade Notices section countries are grouped by continents as far as possible; they are listed alphabetically on the contents page.

Import Duties (Temporary Exemptions) (No. 13) Order, 1972

THE Treasury has made the Import Duties (Temporary Exemptions) (No. 13) Order, 1972. This Order provides for the temporary exemption from import duty, until December 31, 1972, of a certain chemical classified under heading 29.44 of the Customs and Excise Tariff and also provides that certain strips and sheets of iron or steel, coated with tin, shall continue to be exempt from import duty until November 1, 1972.

The Order came into operation on October 3, 1972 and has been published as Statutory Instrument 1972 No. 1471. Copies of the Order are available from Her Majesty's Stationery Office, 49 High Holborn, London, WC1 and branches (price 3p) or by post from HMSO, PO Box 569, London, SE1 (price 5½p).

Applications for reimposition of import duty

THE Department of Trade and Industry, Tariff Division, has received an application for the reimposition of the import duty from January 1, 1973 on the following item, which is at present temporarily exempt. This is in response to the notice of the Annual Review of temporary exemptions published in *Trade and Industry* on August 17, 1972.

Tariff heading	Description	Reference
29.35	1,4-Butyrolactone	11608

Representations should be addressed to Tariff Division, Department of Trade and Industry, Kingsgate House, 66/74 Victoria Street, London SW1E 6SJ, giving the respective reference shown above. These should be received by October 26.

Unido procurement procedure brochure

THE United Nations Industrial Development Organisation (Unido) has published a small brochure entitled *Procurement of equipment and services for Unido field projects*. The brochure deals with procedures followed by Unido in awarding contracts for engineering and management consultancy services and for purchase of equipment and supplies required to carry out its own technical assistance and pre-investment projects and implement projects for which it is responsible. Copies of the brochure are available from Unido, PO Box 707, A-1011 Vienna, Austria.

Thailand: tax changes

THE Thai National Executive Council has announced changes in certain kinds of taxes. Tax on incomes of juristic persons, business taxes and payment of interest to taxpayers will be affected. Details are available from Commercial Relations and Export Division.

CRE ext. 3348/2252

WE CARE

all the way to the WEST INDIES, GUYANA, SURINAM, VENEZUELA, COLOMBIA, MEXICO, GUATEMALA, BRITISH HONDURAS, U.S. GULF PORTS and SOUTH and EAST AFRICA.

for your cargo

Harrison Line

Thos. & Jas. Harrison Ltd
Mersey Chambers Liverpool L2 8UF
Fountain House
Fenchurch Street London EC3M 5EE

4

Capital expenditure in Japan: Summary of regulations

PRIOR to 1967, all applications for direct foreign investment in Japan were considered on individual merit but, in June of that year, the Japanese Government inaugurated a policy of progressive capital liberalisation, under which applications would be classified into three classes:

Class 1 where direct foreign participation was approved *automatically* up to a limit of 50 per cent

Class 2 where direct foreign participation was approved *automatically* up to a limit of 100 per cent

Class 3 where direct foreign participation was subject to case-by-case examination. *Applications for investment which fall outside the limits for automatic approval continue to be considered on merit.*

The coverage of each class varied through four rounds of decontrol, the last of which became effective on August 4, 1971, when seven industries remained in class 3, 228 in class 2 and the remainder in class 1. Class 2 and 3 items are appended to this note.

However, before an application qualified for automatic approval, certain preconditions had to be satisfied, and these too have varied in recent years. The current regulations give the competent Minister the authority to grant automatic approval to applications for direct foreign investment subject to the following conditions:

Class 1 industries:

the enterprise in question is being newly established;

not more than 50 per cent of the total issued equity stock is held by foreign investors;

at least 50 per cent of the total issued equity stock is held by Japanese investors who are already engaged in the same line of business as that of the enterprise to be established and at least 33⅓ per cent is held by one such Japanese investor;

there are no contributions in kind to the equity by Japanese investors except in the form of real estate other than factories, shops or warehouses;

the enterprise will not immediately after its establishment receive any transfer of business from an existing company and will not combine with an existing company;

the proportion of Japanese members of the board of directors or of Japanese executive directors is not less than the proportion of Japanese-owned equity to the total equity stock;

decisions are taken in accordance with the normal procedures provided for in the Japanese Commercial Code; and

the investment will not have a greatly detrimental affect on Japanese industries.

Class 2 industries:

the enterprise in question is being newly established;

there are no contributions in kind to the equity by Japanese investors except in the form of real estate other than factories, shops or warehouses;

the enterprise will not immediately after its establishment receive any transfer of business from an existing company and will not combine with an existing company; and

the investment will not have a greatly detrimental effect on Japanese industries.

Portfolio investment

The acquisition by foreign investors of stock in existing enterprises is approved automatically provided the total foreign holding is less than 25 per cent of total issued stock in the case of industries in categories 1 and 2 and less than 15 per cent in the case of category 3 industries. These upper limits are subject also to a maximum holding by an individual foreign investor of less than 10 per cent. Applications for the acquisition by foreign investors of stock in excess of these limits are subject to individual screening by the Japanese authorities.

Appendix

Class 3—Industries subject to case-by-case screening

Primary industries related to agriculture, forestry and fisheries
Oil refining, distribution or sales
Leather and leather products manufacturing industry
Manufacturing, sales or leasing of electronic computers (including peripheral equipment, terminal units, parts and accessories) and computer aided system
Information processing industry (including the computer software industry)
Retail trade operations with more than 11 stores
Real estate business

Class 2—Liberalised industries

Construction contracting business (excluding business of contracting for civil engineer-works by general contract, building works by general contract, plumbing, pipeline laying and well-sinking works, steel works, paving works, dredging and reclamation works and machine and equipment installing works by contract)
Marine products canning industry (including bottling and potting industry)
Agar-agar manufacturing industry
Fish, ham and sausage manufacturing industry
Fish jelly products manufacturing industry
Soup manufacturing industry
Pickles manufacturing industry
Manufacturing industry of soy sauce and amino acid liquid for food
Monosodium glutamate manufacturing industry
Vinegar manufacturing industry
Spices manufacturing industry (excluding curry and curry products)
Liquors manufacturing industry (excluding whisky)
Single-substance forage manufacturing industry (excluding protein feed of microbial source)
Animal oils and fats manufacturing industry
Baking powder and yeast manufacturing industry
Tea manufacturing industry
Ice manufacturing industry
Instance coffee manufacturing industry
Corn flakes manufacturing industry
Oatmeal manufacturing industry
Raw silk reeling industry
Cotton and rayon staple fibre spinning industry
Synthetic fibre spinning industry (limited to the one with the use of cotton spinning system)
Silk spinning industry
Rope manufacturing industry
Fishing-net manufacturing industry
Knitted laces manufacturing industry
Bobbin lace type of lace manufacturing industry
Wadding manufacturing industry
Coated or water-proof fabrics manufacturing industry
Felt hat and hat bodies manufacturing industry
Cloth-made hats and caps manufacturing industry
Neckties manufacturing industry
Scarfs and mufflers manufacturing industry
Handkerchief manufacturing industry
Bedclothes manufacturing industry
Canvas goods manufacturing industry
Textile bags manufacturing industry
Embroidery industry
Wood chips manufacturing industry
Millwork manufacturing industry
Manufacturing industry of wooden assembling materials
Office and store furnishings manufacturing industry
Manufacturing industry of sunshade for window or door
Mirror frames and picture frames manufacturing industry
Dissolving pulp manufacturing industry
Paper pulp manufacturing industry
Paper manufacturing industry (excluding tissuepaper and toilet paper)
Paperboard manufacturing industry
Bookbinding cloth manufacturing industry
Office paper-products manufacturing industry
School paper-products manufacturing industry
Daily use paper-products manufacturing industry
Large paper sacks manufacturing industry

ENGLISH EXPORTERS (LONDON) LTD.
70 Baker Street, London, W.1.
Telephone: 01-486 4871 (7 lines) *Telex:* 23794 *Cables:* ENGLEXPORT London
We offer our services to manufacturers concerning their exports to anywhere in the World without charge to them and pay here against shipping documents.
WE SPECIALISE IN SWITCH, TRIANGULAR AND BARTER TRANSACTIONS.

rtn Cellophane manufacturing industry
Newspapers business
Ammonium fertiliser manufacturing industry
Calcium cyanamide manufacturing industry
Mixed fertilisers, silicate acid fertilisers, magnesium fertilisers and other fertilisers mixture manufacturing industry
Carbide manufacturing industry
Compressed gas and liquid gas manufacturing industry
Coal-tar products manufacturing industry
Rayon manufacturing industry
Printing inks manufacturing industry
Cleansing, polishing and scouring preparations manufacturing industry
Candles manufacturing industry
Natural resins and wood chemical products manufacturing industry
Grease manufacturing industry
Coke manufacturing industry
Paving materials manufacturing industry
Bicycle tyres and tubes manufacturing industry
Conveyor belt manufacturing industry
Rubber coated cloth and its products manufacturing industry
Mixed compound rubber manufacturing industry
Sheet glass manufacturing industry
Manufacturing industry of glass-made materials for processing
Glass-made containers manufacturing industry (excluding products made of special glass)
Laboratory or medical glass implements manufacturing industry (excluding products made of special glass)
Table or kitchen glassware manufacturing industry (excluding products made of special glass)
Cement manufacturing industry
Cement products manufacturing industry (excluding products of asbestos cement)
Ceramic tableware or kitchen ceramic goods manufacturing industry
Ceramic ornaments manufacturing industry
Refrectory bricks manufacturing industry
Artificial aggregate manufacturing industry
Artificial jewels manufacturing industry
Rock wool, slag wool and its products manufacturing industry
Gypsum products manufacturing industry
Lime manufacturing industry
Ordinary steel manufacturing industry (limited to the one with integrated work of iron and steel making and rolling)
Electric furnaced pig iron manufacturing industry
Open-hearth furnace steel producing and rolling industry (ordinary steel only)
Manufacturing industry of steel making and rolling using converters (ordinary steel only)
Electric-furnace steel producing and rolling industry (ordinary steel only)
Hot rolling industry
Cold rolling industry
Cold-formed steel shapes manufacturing industry
Steel pipes manufacturing industry
Rerolling industry
Drawn steel pipe manufacturing industry
Tin sheets and plates manufacturing industry
Galvanised steel sheets and plates manufacturing industry
Coated steel pipe manufacturing industry
Coated iron and steel wires manufacturing industry
Chromium-coated steel sheets and plates, vinyl-coated steel sheets and plates and aluminium-coated steel sheets and plates manufacturing industry
Forged steel manufacturing industry (limited to the ordinary steel manufacturing industry except the one which produces foregoings from semi-finished steel)
Iron castings manufacturing industry
Cast-iron pipes manufacturing industry
Malleable iron castings manufacturing industry
Secondary zinc smelting and refining industry
Non-ferrous castings manufacturing industry
Tin cans and other products of coated steel sheets and plates manufacturing industry
Files manufacturing industry
Farming implements manufacturing industry
Plumbers' supplies manufacturing industry
Prefabricated buildings components manufacturing industry
Curtain walls manufacturing industry
Hot dip galvanizing industry
Electro-plating industry
Flexible tubes manufacturing industry
Lighting apparatus manufacturing industry (excluding electric lighting apparatus)
Boilers and accessories thereof manufacturing industry (excluding small boilers and super-critical pressure boilers)
Steam engines, turbines and hydraulic turbines manufacturing industry (excluding super-critical press turbines for power)
Elevators and escalators manufacturing industry
Sewing machines manufacturing industry (excluding industrial sewing machines)
Hand-operated wool knitting machines manufacturing industry
Pipe processing industry and pipe fittings manufacturing industry
Moulds and dies, their parts and accessories manufacturing industry
Generators, motors and other rotating electrical machinery manufacturing industry (excluding super-critical pressure turbine generators, super conductive generators, MHD power generating equipment, Acyclic generators and small motors)
Transformers manufacturing industry
Switchgears, switchboards and power controlling equipments manufacturing industry
Wiring devices and supplies manufacturing industry
Household electric appliances manufacturing industry
Manufacturing industry of fluorescent lamps and general lighting incandescent lamps
Telephone sets and telephone switchboards manufacturing industry (limited to the one which manufactures magneto, common battery, or rotary dial telephone sets and switchboards except electronic ones)
Radio and TV receivers manufacturing industry
Electric audio machines and equipment manufacturing industry
Traffic signal security equipment manufacturing industry (excluding electronic type equipment)
Motorcycle manufacturing industry
Railway rolling stock manufacturing industry
Parts of railway vehicles manufacturing industry
Bicycles and parts manufacturing industry
Shipbuilding industry
Marine propulsion engine manufacturing industry
Ordinary length measuring tools manufacturing industry
Balances and scales manufacturing industry
Thermometers manufacturing industry
Microscopes, monocular-type telescopes, binocular-type telscopes, magnifiers and opera glasses manufacturing industry
Photographic cameras and parts and accessories thereof manufacturing industry
Motion picture equipments and parts and accessories thereof manufacturing industry
Lenses and prisms for optical apparatus manufacturing industry
Watches and watchcases manufacturing industry
Precious metal products manufacturing industry
Jewellery accessories and their materials processing industry
Lapidary working industry
Piano manufacturing industry
Organ manufacturing industry
Harmonica manufacturing industry
Guitar manufacturing industry
Doll manufacturing industry
Artificial flower and ornamental feather manufacturing industry
Slide fastener manufacturing industry
Plastic sheets, tubes, bars and joints manufacturing industry
Plastic flooring materials manufacturing industry
Straw or panama hats manufacturing industry
Brooms and brushes manufacturing industry
Signboards and the like manufacturing industry
Processed hair manufacturing industry
Vacuum flasks manufacturing industry
Export business
Manufactured tobacco and salt retail business
Restaurants
Money exchange business
Cable railway business
Cableway business
Taxi services for general passengers
Chartered bus services
Special cargo transportation services
Port passenger transportation services
River transportation services
Lake transportation services
Warehousing business
Forwarding agents
Travel agency business
Marine forwarding brokerage
Automobile terminal services
Marine metage business
Marine appraisement business
Line handling business
Tugboat services
Harbour oriented transport services
Marine disaster rescue services
Salvaging industry
Services incidental to communications
Hotels and inns
Barbers
Beauty salons
Special bathhouses
Motion picture production industry
Motion theatres, playhouses and show places
Services connected with motion picture business
Dramatic companies, orchestra and dancing companies and miscellaneous theatrical companies
Athletic ground services
Golf course services
Amusement parks
Game houses
Bowling alleys
Golf or baseball batting practice ranges
Amusement goods renting services
Parking-place business
Advertisement agents
Outdoor advertisement services
News supplying business
Duplication services
Commercial merchandise testing business
Building maintenance services
Intermediary business concerning copyrights
Private employment agencies
Geological survey business (excluding prospecting)
Hydrographic survey services
Construction engineering consulting business
Building designing and supervising business
Labour consultant business
Marine waste oil disposal services
Vocational training facilities
Drivers' schools

Note

1. The manufacturing, sale or leasing of electronic computers (including peripheral equipment, terminal units, parts and accessories) and electronic computer aided systems will automatically become a 'class-1 liberalised industry' after the lapse of three years, that is by August 4, 1974.

2. The processed cheese industry is a 'class-1 liberalised industry' only when domestic natural cheese accounts for more than one-third of the raw materials used in the manufacture of the product.

3. Consideration will be given to the question of how to deal with industries which do not at present exist or which are not at present carried on in Japan, as the need arises, according to the importance of the particular industry.

CRE ext. 2240

Dear Editor

Letters to the Editor should be addressed to the Editor, *Trade and Industry*, Room 437, Department of Trade and Industry, 1 Victoria Street, London, SW1H 0ET, and *not* to HMSO.

TARIFF & TRADE NOTICES

Details of European Communities legislation which formerly appeared on this page are now published in the European Communities Section of the journal.

France

VALUE ADDED TAX: MOTOR-CYCLES: The French *Journal Officiel* of September 28 announced that, with effect from October 1, 1972, the maximum rate of value added tax (33.3 per cent) will apply to transactions covering the importation, sale, delivery, commission or workmanship on motor-cycles of a cylinder capacity of 240 cc or more. This applies also to snow motors and snow scooters. Copies of the French text can be sent on request or seen at Export House. **EDB ext. 423/408/288**

Spain

CUSTOMS TARIFF AMENDMENTS: The Spanish *State Gazette* of September 19 announced the following additions and a deletion to the capital goods list of the Spanish customs tariff imported at a concessional rate of 5 per cent import duty subject to the usual conditions:

Tariff no.	Description	Valid until
ADDITIONS		
84.09	Self-propelled road rollers, with vibratory rollers and four or more independent compacting wheels and those wheel rollers over 9 tons weight	18.9.73
84.09	Self-propelled road rollers (segments, pistons or sheepsfoot)	18.9.74
84.22.F.2	Asymmetric gantry cranes 360° slewing on permanent roller track with diameter over 9 m	18.9.73
84.22.1	Self-propelled loaders with wheels specially designed for underground mining	18.9.74
84.23.B	Motorgraders (engine power less than 110 hp) or over 160 hp (DIN-6270)	18.9.74
84.36.D	Automatic reeling machines for tying in yarns with automatic removal and replacement of spinning bobbin	18.9.74
84.45.C.1.a or 84.45.C.1.d	Automatic lathes, including copying lathes fully automatic (even the gearbox) over 3,000 kg	18.9.74
84.45.C.10	Special automatic machines for making calibrated chain bowls and bushings using steel strip	18.9.73
84.45.C.16	Special automatic grinding machines for finishing twist drills or reamers	18.9.74
84.59.J	Self-propelled machines for cutting expansion joints in concrete or agglomerate pavings	18.9.74
87.07.A.2	Special straddle carriers for handling containers	18.9.74
DELETION		
84.45.C.5	Horizontal boring machines, mobile column, with rising and falling saddle, sliding head for boring (using rotary tool) series of bores over 750 mm depth	

EDB ext. 462/471/472/473

The Spanish *State Gazette* of September 19 announced the following extensions of validity to the following tariff headings in the capital goods list of the Spanish customs tariff imported at a concessional rate of 5 per cent import duty subject to the usual conditions:

Tariff heading	Description	Valid until
84.59.F	Machines for spreading gravel. Hydraulic concrete or mixtures of bituminous products and aggregates, except gravel spreading machines not self-propelled	15.11.74
87.02.B.2.d	Special vehicles for the transport of earth, rocks and minerals, mineral materials, other than those falling within subheadings 87.02.B.2 (a), (b) and (c), with three or more driving axles.	16.1.74

EDB ext. 462/471/472/473

IRAN ALMANACK
1972 Edition

This book is the only one of its kind containing comprehensive information, facts and figures concerning Iranian political life, economy, culture and other fields. No similar books are published about Iran in any language. 800 pp. Price $12.00.

Iran Who's Who 1972, First edition, 480 pp. $9.00.

MARKETS IN EUROPE 9th edition $2.50

'OVERSEAS DIRECTORIES & SUBSCRIPTIONS' £2.50
(Airmail Edn.) 8oz. Directories Only. £1.50 (Air $10.—)

PUBLISHING & DISTRIBUTING CO. LTD.,
177, REGENT STREET, LONDON, W.1
Tel.: 01-734 6534/5 Telex WESTCHAM LONDON 268312/PUBDISCO

Sweden

TAX INCREASES ON CIGARETTES AND ALCOHOLIC BEVERAGES—CORRECTION: A correction should be made to the three items listed under 'Wines and Spirits' on page 554 of the September 28 issue. The reference to 'including tax' should read 'excluding tax' in each case. **EDB ext. 458/459/461**

Yugoslavia

CREDIT BUSINESS WITH FOREIGN COUNTRIES: The translation of the new Yugoslav law on credit business with foreign countries has been received and a copy is available for inspection at Tariff Section of Export Data Branch. **EDB ext. 420/475**

Zambia

EXCHANGE CONTROL: The Bank of Zambia announced on September 12 new Zambian restrictions, effective immediately, on the remittance abroad of profits, dividends and rents, for a duration of one year only.

Profits and dividends. Permission to remit profits and dividends by subsidiaries or branches of companies whose head offices are situated outside Zambia will only be granted up to a maximum of the equivalent of 30 per cent of the equity capital of the company or 50 per cent of the net profits of the company, whichever is less. The profits should derive from the year's operation after full provision has been made for local taxation.

Rents. Permission to remit rents will only be given to a maximum of 50 per cent of the net annual rental income, as duly certified by a professional valuer, in terms of Statutory Instrument No. 85 of 1972 on application to Exchange Control.

ESD ext. 471/472/473/462

South Africa

CUSTOMS TARIFF APPLICATION: Customs Tariff Application List 568, published in the South African *Government Gazette* of October 6, contains applications to the Board of Trade and Industries for increase in duty on

Shot and angular grit of iron or steel whether or not graded

Crawler track mounted percussion drill rigs (84.23.90)

Plywood strips used as carpet gripper

Rovings and chopped strands and chopped strand mat of glass fibre

Certain tubes and pipes of cast iron (excluding down pipes and gutter pipes).

British trade organisations thought to be interested in the application are being informed. Any British firm affected which wishes to make representations to the South African Board of Trade and Industries and belongs to a trade organisation should, therefore, first contact its own trade association. Firms proposing to make independent representations to the South African authorities and requiring further information concerning the application should address inquiries to Commercial Relations and Export Division.

CRE ext. 2274

EXPLOSIVES REGULATIONS: The South African *Government Gazette* of September 8 publishes the list of 'Authorised Explosives' and the new Explosives Regulations. These replace the 1962 regulations and are effective from September 8, 1972. They cover the use and manufacture of explosives, their importation and exportation, transport, storage, packing and marking, and the marking of packages. Particular mention is made of fireworks.

EDB ext. 471/472/473/462

MOTOR-CYCLISTS' HELMETS: South African *Government Gazette* notice R1545 of September 1 publishes the compulsory standard specification for protective helmets for motor-cyclists. It will be effective from November 1, 1972. **EDB ext. 471/472/473/462**

Mauritius

IMPORT CONTROL OF GLOVES: Mauritius Government Notice 58 of 1972 announces the necessity for importers to obtain an import licence to import gloves of all types into Mauritius from, *inter alia*, the United Kingdom. **EDB ext. 471/472/473/462**

Malaysia

SALES TAX ACT: The Malaysian *Government Gazette* has published the Sales Tax (Exemption) (Amendment) (No. 5) Order 1972 which amends the second schedule to the Sales Tax (Exemption) Order 1972 by the addition of the following:

Goods landed—

(*a*) in Sabah after transportation from West Malaysia or Sarawak;

(*b*) in Sarawak after transportation from West Malaysia or Sabah;

(*c*) in West Malaysia after transportation from Sabah or Sarawak,

which have been shipped directly from the territory of despatch and in respect of which the proper officer of customs is satisfied—

(i) that sales tax has been paid in that territory viz. West Malaysia, Sabah or Sarawak as the case may be; and

(ii) that no drawback of sales tax so paid has been granted.

Provided that this exemption shall not apply to goods which are subject to the provisions of Section 80 of the Sales Tax Act, 1972.

Goods imported by post which are for the personal use of the importer and which are exempted from the payment of customs duties under the terms of any order issued by the Minister or the Director General of Customs and Excise.

The following goods when imported into, or purchased domestically from a licensed manufacturer in Sabah, by the Navy, Army and Air Force Institutes and any other organisation providing similar services for any Commonwealth Force in Sabah—

Intoxicating liquors; cigarettes, including paper and filter tips; cigars and cheroots; cosmetics and perfumery; essences and flavouring materials other than those used in the processing of food and drink; cutlery, including forks and spoons; playing cards of all kinds; soap; stationery and stationery supplies including pens and pencils; manufactured tobacco imported in containers of any kind used for retail sales; toys and games.

Provided that this exemption shall be subject to the conditions as laid down under columns 4 and 5 of Item 5 of the Customs Duties (Exemption) Order, 1963 (applicable to the State of Sabah).

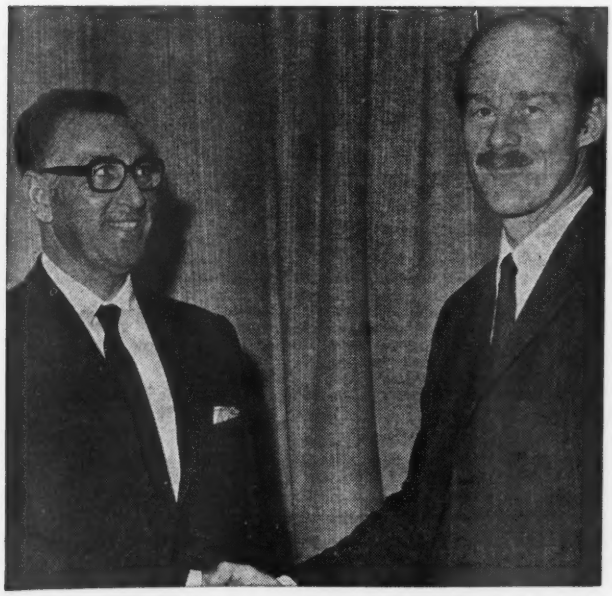
Any goods imported into, purchased domestically from a licensed manufacturer in Sarawak or purchased prior to clearing through the Customs, by the Navy, Army and Air Force Institutes, for sale to and consumption by members of the Commonwealth Forces on active service in Sarawak, subject to such conditions as the Regional Director of Customs may impose, provided the Regional Director of Customs is satisfied that the goods are such consumable goods as members of the Commonwealth Forces could reasonably be expected to require while serving under active service conditions in Sarawak.

This schedule covers goods that are exempted from payment of sales tax in accordance with qualifications and conditions applicable to each category. No further information is available.

ESD ext. 469/468/401

INDUSTRIAL DEVELOPMENT: The Malaysian Federal Industrial Development Authority (FIDA) has published Industrial Trends Survey No. 8 covering the position of manufacturing establishments during February to May 1972 and their expectations of business from June to September 1972. The survey indicates that expectation on future investment plans in the manufacturing sector is encouraging, despite the depressed market atmosphere, and that a further improvement in sales is generally anticipated in the next four months. Further details are available. Ref. CRE 26593.

CRE ext. 2143



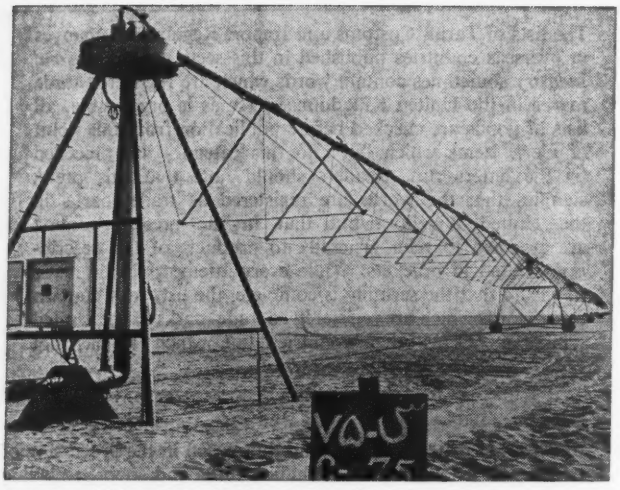
Mr. Mohammed Mirzaban, Deputy Prime Minister and Minister for Economy of the Egyptian Arab Republic, seen at the Department of Trade and Industry last week with Lord Limerick, Parliamentary Under-Secretary of State for Trade. The Egyptian Minister was en route to Cairo from Washington, where he had attended the International Monetary Fund and IBRD meetings.

The lists of Tariff, Customs and Import Regulations changes in overseas countries published in this section of *Trade and Industry* sometimes contain words which are registered trade marks in the United Kingdom. So far as is practicable, all lists of goods are checked before publication from this point of view. Items which fall into this category are preceded by the letters rtm. Readers should note that this prefix signifies that the words are registered as trade marks in the United Kingdom but that in the present context are assumed to refer generally to products of the descriptions stated in brackets. While every attempt will be made to ensure that the scrutiny is complete, the lists may contain other words which are registered as trade marks in the United Kingdom or in other countries but which it has not been possible to identify.

Australia

RESULT OF DUMPING TARIFF BOARD INQUIRY ON INSULATORS: A notice was published in the *Board of Trade Journal*, November 5, 1969, to the effect that a reference had been made to the Tariff Board under the Australian Tariff (Dumping and Subsidies) Act on porcelain or glass insulators for electric power transmission (tariff item 85.25). The inquiry has been completed and as a result, dumping has been confirmed and dumping duties imposed retrospectively, in the case of Japan from February 1, 1971 and for other countries from November 17, 1969. Ref. CRE 2022/69. **CRE ext. 2318/2319**

RESULT OF DUMPING TARIFF BOARD INQUIRY ON DOOR CLOSERS: A notice was published in *Trade and Industry*, April 7, 1971, to the effect that interim anti-dumping action in the form of cash securities on hydraulic and non-hydraulic door closers (tariff item 83.02) had been introduced. The question of dumping of these goods was looked into at the inquiry on fittings and mountings, hat-racks, etc., of base metal. Dumping was confirmed and dumping duties imposed retrospectively from April 1, 1971. Ref. CRE 806/71. **CRE ext. 2318/2319**



Part of a trial installation in Kufra, Libya, this Rainger 7 irrigation system from SPP Agricultural Services of Reading sprinkles water over an area of 100 hectares (247 acres). The 550 metre pipeline rotates, tracing a circumference of 2 miles. The irrigation system is being used in a pilot scheme at Kufra in the Sahara Desert to use underground water for developing grazing land for sheep.

New Zealand

CUSTOMS TARIFF CHANGES: The New Zealand Government have issued Customs Tariff Amendment Order (No. 11) 1972, which came into force on September 8 amending certain items in the New Zealand customs tariff. The chapter items 51.01.031, 51.01.032 and 51.01.039 should now read as follows:

Number	Description	Unit	Rates of duty: British preferential	Most favoured nation	General tariff
	Chapter 51. Man-made fibres (continuous)				
51.01	Yarn of man-made fibres (continuous), not put up for retail sale:				
	Of synthetic fibres:				
	Other yarn and thread:				
	Other kinds:				
	Not containing sheep's or lamb's wool or fine animal hair:				
	Other:				
	Polyester:				
	Not bulked, stretch, or texturised:				
	Weighing not less than 110 g but not more than 160 g per 9,000 m:				
51.01.033	As may be approved by Minister and under such conditions as he may prescribe	lb	Free	.. DC5%	10%
51.01.035	Other: Weighing not less than 110 g but not more than 130 g per 9,000 m	lb	Free*	.. DC5%*	10%*
51.01.036	Weighing more than 130 g but not more than 160 g per 9,000 m	lb	Free†	.. DC5%†	10%†
51.01.038	Other kinds	lb	Free	.. DC5%	10%

* Plus a duty equal to the amount by which the cif value is less than $1.24 per lb.
† Plus a duty equal to the amount by which the cif value is less than $1.15 per lb.
DC = Developing countries.

EDB ext. 401/468/469

The New Zealand Government issued Customs Tariff Amendment Order (No. 16) 1972, which came into force on September 15, 1972 amending tariff items 74.14.011, 74.14.012, 74.14.013 and 74.14.019 to read as follows:

Number	Description	Unit	Rates of duty: British preferential	Most favoured nation	General tariff
	Chapter 74. Copper and articles thereof				
74.14	Nails, tacks, staples, hook-nails, spiked cramps, studs, spikes and drawing pins, of copper, or of iron or steel with heads of copper:				
	Nails:				
74.14.011	Peculiar to use in footwear	cwt.	Free	..	Free
	Other:				
	Of iron or steel with heads of copper:				
74.14.013	As may be determined by the Minister	cwt.	25%*	45%*	50%*
74.14.019	Other	cwt.	Free	20%	25%
	Other kinds:				
74.14.021	Of unalloyed copper *per lb*	lb.	26c	26c *plus* 10%	26c *plus* 15%
74.14.022	Of silicon bronze	cwt.	15%	25%	30%
74.14.023	Of other alloys	cwt.	Free	10%	15%

* Or such lower rate of duty as the Minister may in any case direct.

EDB ext. 401/468/469

The New Zealand Government have issued Customs Tariff Amendment Order (No. 18) 1972, which came into force on September 22 amending tariff items 86.03.001 and 86.03.009 which should now read as follows:

Number	Description	Unit	Rates of duty: British preferential	Most favoured nation	General tariff
	Chapter 86 Railway and tramway locomotives, rolling-stock and parts thereof; railway and tramway track fixtures and fittings; traffic signalling equipment of all kinds (not electrically powered)				
86.03	Other rail locomotives:				
	Electric:				
86.03.002	Of a weight not exceeding 45 tons	No.	32½% Aul Free	52½%	57½%
86.03.003	Other	No.	Free	20%	25%
	Other kinds:				
86.03.004	Of a weight not exceeding 45 tons	No.	32½% Aul 12%	52½%	57½%
86.03.008	Other	No.	Free	20%	25%

Ref. CRE 1162/72.

EDB ext. 401/468/469

Western Samoa

CUSTOMS TARIFF CHANGES: The Western Samoa Government have issued a Customs Tariff Amendment Order, which came into force on July 1, 1972 amending certain items in the Western Samoa customs tariff, which should now read as follows:

INDIA

AFRASIAN MARKETS (The Amalgamated Press), Bombay. International Register of Chambers of Commerce and other Organizations, 800 printed pages, Price £5.50. Available 1970/71

MARKETS IN EUROPE 9th edition £2.50

'OVERSEAS DIRECTORIES & SUBSCRIPTIONS' £2.50
(Airmail Edn.) 8oz. Directories Only. £1.50 (Air $10—)

PUBLISHING & DISTRIBUTING CO. LTD.,
177, REGENT STREET, LONDON, W.1
Tel.: 01-734 6534/5 Telex WESTCHAM LONDON 268312/PUBDISCO

SCHEDULE—SECTION 3

Tariff item no.	Tariff item	Rates: Commonwealth preferential	Rates: General
	Class I—Animals, Agricultural Products, Foods and Groceries		
9	Biscuits (1) Cabin or ships' bread	40%	40%
	(2) n.e.i.	30%	40%
16	Eggs — fresh including frozen	25%	25%
18	Fish — fresh, frozen and other	25%	36%
22	Fruits — fresh, frozen and other	25%	36%
23	Honey	25%	25%
24A	Ice cream — frozen	36%	36%
28	Meat including poultry and small goods, viz:		
	(1) Fresh or frozen excluding mutton flaps	25%	36%
	(2) Mutton flaps and other kinds	15%	20%
30	Provisions n.e.i.	36%	45%
39	Vegetables — fresh and preserved	25%	36%
	Class II — Tobacco		
50	Cigarettes exceeding in weight 2½ lb. per 1,000	$11.60	$12.60
51	Cigarettes n.e.i. per 1,000	$11.00	$12.00
52	Cigars .. per lb.	3.50	4.00
54	Tobacco .. per lb.	1.80	2.15
	Class V — Textiles, Clothing, Drapery, etc.		
80	Apparel of pure, imitation, or artificial silk (including nylon and similar synthetics) or of combination of these materials with one another or with any other material; but excluding raincoats, raincapes and rainhoods	40%	50%
81	Apparel n.e.i.	33⅓%	45%
89	Drapery n.e.i.	33⅓%	45%
	Class VIII — Fancy, Sporting and Photographic Goods and Musical Instruments		
134	Radio receiving sets and parts (including dry batteries) peculiar thereto	25%	36%
	Class X — Metals and Machinery		
146 (4a)	Refrigerators and deep-freezers	25%	36%
	Class XI — Vehicles and Fittings		
152	Motor-cycles	65%	65%
155	Motor vehicles n.e.i.	65% for the first WS $1,000 cif thereafter	65%
		100%	100%

Ref. CRE 5960. **EDB ext. 401/468/469**

Canada

ANTI-DUMPING LEGISLATION: Amendments to the Canadian Anti-Dumping Regulations have been issued in PC1972-1305 of June 8, 1972. Their main purpose is to clarify ambiguities and to fill gaps in the existing regulations which had become apparent during their first two years of operation. The most substantive amendments include a redefinition of the regulation governing quantity discounts (Section 4), the substitution of the exchange rate prevailing on the date of sale for that ruling on the date of shipment (Section 12), a more precise definition of how the cost of production should be calculated (Section 16), and the method to be used for the calculation of the export price of goods imported into Canada for further processing (Section 19). Copies of the amendment are available from Commercial Relations and Exports Division.

CRE ext. 2698/2328/2629

Jamaica

EXPORT INDUSTRY ENCOURAGEMENT LAW 1956: The following products have been declared 'approved products' for the purpose of the Export Industry Encouragement Law 1956:

Wrought iron products.

A notice that consideration was being given to designate these products appeared in *Trade and Industry* dated August 31, 1972, page 381. Applications for the status of approved product' and 'approved manufacturer' are processed by the Jamaica Industrial Development Corporation, 4 Winchester Road, Kingston 10, Jamaica (PO Box 505). It would be appreciated if firms writing to the Corporation would copy their initial correspondence to the British High Commission, Commercial Department, PO Box 393, Kingston, Jamaica. **CRE ext. 2627**

Brazil

DUTY REDUCTION ON WATCHES: Brazilian Customs Policy Council Resolution 1351 of June 22 makes the following amendment to the Brazilian customs tariff:

Tariff no.	Description	Duty *ad valorem* cif
91.01.00.00	Pocket watches, wrist watches and the like (including stop watches):	
91.01.99.00	Others	105%
	ex wrist watches, metal with case of glass fibre	15%

EDB ext. 474/476/7312

Argentina

TARIFF AMENDMENT: Argentinian Decree No. 4741/72 eliminates the following product under tariff heading no. 38.19.01.20:

Description	Rate of duty *ad valorem* cif
Fermentation regulator and activator, in the form of a fine yellowish-white powder, made from dried milk whey, potassium bromate, calcium monophosphate and cysteyne	5%

This product will now fall under the general tariff heading no. 38.19.01.99 'Other', for which the rate of import duty is 90 per cent *ad valorem* cif. However, the product will remain free from the prior deposit requirements. **EDB ext. 474/476/7312**

METHOD OF PAYMENT FOR SHEET GLASS: Bulletin No. 105/72 of the National Customs Administration removes all goods under tariff heading no. 70.06 from the list contained in Central Bank Circular No. 434 of February 23, 1972. Payment for goods listed in this Bank Circular must be negotiated 100 per cent through the Financial market—glass under heading 70.06 is now exempted from this requirement and will be subject to the normal regulations for payment. **EDB ext. 474/476/7312**

TARIFF AMENDMENTS: Argentinian Decree No. 4158/72 makes a number of wording amendments, duty amendments and additions to the Tariff under heading no. 73/15. Further details of these changes can be obtained from Tariff Section.

EDB ext. 474/476/7312

Peru

PROHIBITIONS: Directoral Resolution 1532-72-IC/DGI/DECI of September 15 adds further goods to the Peruvian National Register of Manufactured Goods. As a result these products can no longer be imported unless local industry fails to meet local demands as regards quality and quantity. Part of or all of the following tariff numbers are affected:

48.07	48.13	69.05	69.06	69.07	69.08	69.09	69.10
69.12	69.14	73.23	73.31	73.40	76.08	83.05	83.13

EDB ext. 474/476/7312

Certificates of Origin

Export Invoices for all Commonwealth Countries
Also E.F.T.A. Certificates

Complete price list on request

For our unequalled return of post service—write, wire or phone

THE CHATSWORTH PRESS & PAPER CO., LTD,
39, Waterloo Road, London, NW2 7TT *Tel.:* **01-452 9861 (3 lines)**

A complete series of five explanatory films about the Industrial Relations Act is now available.

The first of these films, An Introduction to the Act, was issued by the Department of Employment last autumn. Now you can also obtain four new films, each covering a major aspect of the Act.

All these films are in colour, all are 16mm, and each runs for approximately 15 minutes.

You can either buy or hire any of these films. A script is provided with every film, whether bought or hired.

The series comprises:

The Industrial Relations Act: An Introduction
(issued October 1971)
Explains the objectives of the Act and outlines its main provisions. Price £47·25. Minimum hire charge £1·60. Time 19 minutes.
Ref. No. UK 3106

The Act and the Individual
Examines the rights which the Act gives the individual worker in relation to both employers and unions. Price £33·75. Minimum hire charge £1·60. Time 13 minutes. *Ref. No. UK 3140*

The Act and the Trade Union
Looks at the effect of the Act on trade unions, and explains the new institutions and procedures. Price £33·75. Minimum hire charge £1·60. Time 14 minutes. *Ref. No. UK 3141*

The Act and the Employer
Explains the effect of the Act on employers in their dealings with individual workers and with trade unions. Price £47·25. Minimum hire charge £1·60. Time 18 minutes. *Ref. No. UK 3142*

Collective Bargaining and Agreements
Describes the machinery created by the Act to resolve problems of recognition and negotiating rights. Price £47·25. Minimum hire charge £1·60. Time 17 minutes. *Ref. No. UK 3143*

If you're involved in industrial relations—at company or plant level, in unions or management—you'll find these films invaluable. They will be particularly useful as teaching aids to anyone organising courses or seminars on the Industrial Relations Act.

Available from Central Film Library
Government Building, Bromyard Avenue, London W3 7JB or 16-17 Woodside Terrace, Glasgow C3 or 42 Park Place, Cardiff CF1 3PY.

There's food for thought in these five cans

(Issued by the Department of Employment)

Please send the coupon to any one of the above Central Film Library Addresses.
I should like further details about the series of films on the Industrial Relations Act 1971, and an order form for purchase/hire.* (*Delete as applicable).

Name_____
(BLOCK CAPITALS THROUGHOUT, PLEASE)
Position_____
Organisation_____
Address_____
_____ T & I/8
Tel. No._____

INDUSTRIAL RELATIONS ACT 1971

Now on film

Consolidated list of goods subject to security export control

THE ATTENTION of manufacturers and exporters is drawn to the following Schedule of goods which replaces the list appearing in the *Board of Trade Journal* for October 8, 1969 (as amended). This Schedule defines goods which may be subject to export restrictions for reasons of national security. The licensing requirement applies to most destinations but the security implications arise principally in relation to exports to Albania, Bulgaria, China, Czechoslovakia, the Eastern Zone of Germany, Hungary, Mongolia, North Korea, North Vietnam, Poland, Romania and the USSR. For other destinations licences will be more freely available, but restrictions will apply in some cases, particularly for goods in the ML and AE lists.

The restrictions do not represent a total ban on exports, even to the areas named above, of all goods in the Schedule. Export licences will be allowed for many types of goods, but each case is considered individually. Goods covered by the notes in italics will be allowed in most normal circumstances and in other cases applications will be considered provided they are accompanied by full supporting information, including a precise description of the goods involved, the use to which they are to be put and the ultimate user of the goods. It should be noted that this type of information, where available, greatly assists in the provision of any export licences.

The purpose of these restrictions may be defeated if the countries mentioned above are supplied with technological information relating to the goods appearing in the Schedule. Great care should, therefore, be taken to prevent this happening—for example, when technicians or students from these countries are visiting or being trained at British factories. Where manufacturers or exporters wish to conclude agreements involving the supply of technology to any of these countries, they should consult the Department of Trade & Industry (CRE4 or the sponsoring branch for the industry concerned). This particularly applies to any case where it seems that the technology involved might assist the manufacture of goods in the Schedule.

The Schedule is prepared for general information and guidance. It does not, in this form, have the force of law, nor does it deal with all goods which are subject to export licensing control. For the complete Schedule of goods which currently require licensing, reference should be made to the Export of Goods (Control) Order, 1970, as amended. Amendments will shortly be made to this Statutory Order to give effect to the changes shown in the Schedule. Additionally, manufacturers and exporters are advised that this list is not necessarily exhaustive and that further amendments may be issued from time to time—indeed it is hoped that the first amendment sheet will not be long delayed. Any amendments will also be reflected in similar amendments to the Statutory Order.

General inquiries about the Schedule should be addressed to the Commercial Relations and Exports Division (CRE4), Department of Trade & Industry, Dean Bradley House, 52 Horseferry Road, London SW1P 2AG (telephone number 01-799 5688, ext. 20 or 22) or to the appropriate sponsoring branch for the industry. Applications for export or transhipment licences should be addressed to the Export Licensing Branch, Department of Trade & Industry, Norman Shaw Building (North), Victoria Embankment, London SW1A 2JB (telephone number 01-930 4349) to whom inquiries should be made in any case of doubt as to whether export licences are required. Further copies of the Schedule may be obtained from either the Export Licensing Branch or CRE4.

Munitions list

M.L.1. Small arms and machine guns, as follows:

(a) Rifles, carbines, revolvers, pistols, machine pistols and machine guns;
(b) All specifically designed components and parts therefor.

Pistols (non-automatic or semi-automatic) for short range (less than 25 metres) defence and having a calibre of less than 9 mm parabellum; Sporting or hunting weapons having at least one rifled and one smooth-bore barrel; Rifled-bore sporting or hunting weapons with manually operated cartridge ejection and reloading, and having a magazine capacity limited to 5 cartridges; and
Rifles, carbines or pistols designed only for sporting purposes or capable of being used only for ornamental purposes.

M.L.2. Large calibre armament or weapons and projectors, as follows:

(a) Guns, howitzers, cannon, mortars, tank destroyers, projectile and rocket launchers, military flame throwers, recoilless rifles;
(b) Millitary smoke, gas and pyrotechnic projectors;
(c) All specifically designed components and parts for the foregoing.

M.L.3. Ammunition and all specifically designed components and parts thereof, for the weapons enumerated under Items M.L.1 and M.L.2.

Target ammunition;
Cartridges with an expanding bullet of the type used for hunting or sport; provided that such ammunition is for weapons described in the Note to **M.L.1.**

M.L.4. Bombs, torpedoes, rockets and missiles (guided or un-guided), as follows:

(a) Bombs, torpedoes, grenades (including smoke grenades), smoke canisters, rockets, mines, missiles (guided or unguided), depth charges, fire bombs, incendiary bombs, and military demolition charges, devices and kits, pyrotechnic flare signals for military use, cartridges and simulators; and all specifically designed components and parts therefor;
(b) Apparatus and devices specifically designed for the handling, control; activation, launching, laying, sweeping, discharging, detonation or detection of items enumerated in sub-item (a); and all specifically designed components and parts therefor;
(c) Military fuel thickeners specifically formulated for the purpose of producing materials which, when added to petroleum products, provide a gel-type incendiary material for use in bombs, projectiles, flame throwers or other implements of war.

M.L.5. Fire control equipment and range finders, as follows:

(a) Fire control, gun laying, night sighting, missile tracking and guidance equipment;
(b) Range, position and height finders, and spotting instruments specially designed for military purposes;
(c) Aiming devices, electronic, gyroscopic, acoustic and optical, specially designed for military purposes;
(d) Bomb sights, bombing computers, gun sights and periscopes, specially designed for military purposes;
(e) Television sighting units specially designed for military use;
(f) Components, parts, accessories, and attachments specifically designed for the articles enumerated in sub-items (a), (b), (c), (d) and (e) above.

M.L.6. Tanks, and vehicles specially designed for military purposes, as follows:

(a) Tanks and self-propelled guns;
(b) Military type armed or armoured vehicles and vehicles fitted with mountings for arms;
(c) Armoured railway trains;
(d) Military half tracks;
(e) Military type recovery vehicles;
(f) Gun carriers and tractors specially designed for towing artillery;
(g) Trailers, specifically designed to carry ammunition;
(h) Amphibious and deep water fording military vehicles;
(i) Military mobile repair shops specifically designed to service military equipment;
(j) All other specially designed military vehicles;
(k) Pneumatic tyre casings (excluding tractor and farm implement types) of a kind specially constructed to be bullet proof or to run when deflated;
(l) All specifically designed components and parts for the foregoing.

M.L.7 Toxicological agents, and tear gas, as follows:

(a) Biological, chemical and radio-active materials adapted for use in war to produce casualties in men or animals, or to damage crops;
(b) Equipment specifically designed and intended for the dissemination of the materials described in sub-item (a);
(c) Equipment specifically designed and intended for defence against the materials described in sub-item (a), and for their detection and identification.
(d) Components and parts specially designed for the items listed in (b) and (c) above;
(e) Tear gas and equipment for the dissemination thereof.

M.L.8. Powders, explosives, propellants and stabilisers therefor, as follows:

(a) Powders and liquid or solid propellants for the articles enumerated in Items 3, 4 and 7, and stabilisers therefor;
(b) Military high explosives and stabilisers therefor;
(c) Chemical base high energy solid or liquid fuels specially formulated for military purposes;
(d) Fuming nitric acid.

Propellants and explosives normally used for civilian or industrial purposes or made into cartridges or charges of an exclusively civilian or industrial nature.

M.L.9. Vessels of war, and special naval equipment, as follows:

(a) Combatant vessels or vessels designed for offensive or defensive action (surface or under-water) whether or not converted to non-military use and regardless of current state of repair or operating condition, and hulls or parts of hulls for such vessels;

(b) (1) Diesel engines of 1,500 horse power and over with rotary speed of 700 revolutions per minute or over, specially designed for submarines;
(2) Electric motors specially designed for submarines ie, over 1,000 horse power quick reversing type, liquid cooled and totally enclosed;
(3) Non-magnetic diesel engines, 50 horse power and over, specially designed for military purposes;

An engine shall be presumed to be specially designed for military purposes if:
(i) it has non-magnetic parts other than crankcase, block, head, pistons, covers, end plates, valve facings, gaskets and fuel, lubrication and other supply lines; or
(ii) its non-magnetic content exceeds 75 per cent of total weight;

(c) Magnetic, pressure, and acoustic underwater detection devices specially designed for military purposes; controls and components thereof;
(d) Submarine and torpedo nets;
(e) Compasses and equipment therefor and ship's course indicators, specially designed for submarines;
(f) Components, parts, accessories and attachments for the foregoing such as turrets, naval gun mounts, submarine batteries and catapults.

M.L.10. Aircraft and helicopters, of the piloted or pilotless types and aero-engines and aircraft or helicopter equipment, associated equipment and components, specially designed for military purposes as set out below:

(a) Combat aircraft and helicopters and other aircraft and helicopters specially designed for military purposes, including military reconnaissance, assault, military training and logistic support, and all aircraft and helicopters having special structural features such as multiple hatches, special doors, ramps, reinforced floors and the like, for transporting and airdropping troops, military equipment and supplies; aero-engines specially designed or adapted for use with such aircraft and helicopters, with the exception of aero-engines excepted under the note to Item 1460 (c) (Group E); and component parts thereof;
(b) Airborne equipment, including airborne refuelling equipment, specially designed for use with the aircraft and helicopters and the engines of the types of aircraft and helicopters covered by sub-item (a) and component parts thereof;
(c) Pressure refuellers, pressure refuelling equipment, equipment specially designed to facilitate operations in confined areas and ground equipment not elsewhere specified, developed specially for aircraft and helicopters, aircraft and helicopter engines covered by sub-item (a);
(d) Pressurised breathing equipment and partial pressure suits for use in aircraft and helicopters; anti-'G' suits; military crash helmets; parachutes used for combat personnel, cargo-dropping, and aircraft deceleration; liquid oxygen converters used for aircraft, helicopters and missiles; catapults, and cartridge actuated devices utilised in emergency escape of personnel from aircraft and helicopters.

M.L.11. Electronic equipment specially designed for military use; and components and parts therefor.

M.L.12. Photographic equipment, as follows:

(a) (1) Air reconnaissance cameras and associated equipment designed and used for military purposes;
(2) Film processing and printing machines designed and used for military purposes;
(b) Other cameras and other devices recording on film specially designed and used for military purposes, and specialised equipment designed to make the recorded information militarity useful;
(c) All specially designed components and parts for the foregoing.

M.L.13. Special armoured equipment, as follows:

(a) Armour plate:
(b) Military helmets;
(c) Body armour and flak suits;
(d) Components and parts specially designed for equipment in (c) above.

M.L.14. Specialised military training equipment, as follows:

(a) Specialised military training equipment;
(b) Components, parts. attachments and accessories specially designed for such equipment.

M.L.15. Military infra-red equipment and image intensifier equipment and specialised components therefor.

(See also items I.L.1502 1555 and I.L. 1556.)

M.L.16. Munitions components and materials, as follows:

(a) Brass and Bronze fabrications for primer anvils, fabrications for bullet caps (gilding metal clad steel), cartridge link, primer cap, shell rotating band;
(b) Copper rotating bands for shells, and other copper munitions components;
(c) Gilding metal clad steel;
(d) Rough steel forgings, steel and alloy castings for guns and for arms.

M.L.17. Miscellaneous equipment and materials, as follows:

(a) Self-contained diving and underwater swimming apparatus as follows:
(1) Closed and semi-closed circuit (rebreathing) apparatus;
(2) Specially designed components for use in the conversion of open-circuit apparatus to military use;
(3) Articles exclusively designed for military use with self-contained diving and underwater swimming apparatus;
(b) Bayonets;
(c) Fire arms silencers (mufflers);
(d) Power controlled searchlights and control units therefor, designed for military use;
(e) Construction equipment built to military specifications, specially designed for airborne transport.

M.L.18. (a) Specialised machinery, equipment, and gear specially designed for the examination, manufacture, testing and checking of the arms, ammunition, appliances and machines referred to in this Group;
(b) Vibration testing equipment (except mechanical types), capable of providing a thrust greater than 2,000 lb and specialised ancillary equipment therefor.

Equipment used to determine the safety data of explosives, as required by the International Convention on the Transport of Dangerous Goods (CIM), article 3 and 4 in Annex I RID, provided that such equipment will be used only by the railway authorities of current CIM member countries for testing explosives to transport safety standards, as follows:

(a) Equipment for determining the ignition and deflagration temperatures;
(b) Equipment for steel-shell tests:
(c) Drop hammers not exceeding 20 kg. in weight for determining the sensitivity of explosives to shock;
(d) Equipment for determining the friction sensitivity of explosives when exposed to charges not exceeding 36 kg. in weight.

M.L.19. Environmental chambers capable of pressures below 10^{-4} Torr, and specialised parts, components and ancillary equipment therefor.

Explanatory Note: This item is not intended to cover equipment fitted with such industrial machinery as is not described in this list such as coating machinery not elsewhere specified, and equipment for the casting of plastics.

M.L.20. Cryogenic equipment, as follows:

(a) equipment designed for maintaining an ambient temperature below −170° centigrade (−274° Fahrenheit):
(1) Designed for use in marine, airborne or space applications; or
(2) Ruggedised for mobile ground use;
(b) Electrical, magnetic and electronic equipment or components, and electrical conductors, specially designed for operation continuously or discontinuously at ambient temperatures below −170° centigrade (−274° Fahrenheit) as follows:
(1) Superconductive metals, alloys, compounds, composites and intercalate materials, *except* wire (filaments) having a cross-sectional area of 4.42×10^{-3} sq. mm. (or 75 microns diameter) or greater;
(2) Components, the following:
(i) Josephson effect devices
(ii) Dayem bridges
(iii) proximity effect bridges
(iv) super-normal-super (SNS) proximity devices
(v) memory and logic devices
(vi) phase slip devices;
(3) High field-high current density super-conductive magnets rated for producing magnetic fields of 30 kilogauss or greater at current densities of 10,000 amperes per square centimetre or greater and specialised components therefor, *except* magnets with coil outside diameter greater than 5 cm. and less than 50 cm.
(4) Superconducting electrical equipment (rotating machines and transformers) designed for use in marine or airborne applications, and specialised components therefor;
(c) Specially designed accessories, sub-assemblies, parts or components for sub-items (a) and (b).

Niobium-tantalum superconductive alloy wire or composite in quantities not exceeding 10 kilograms.

M.L.22. Electrically triggered shutters of the carbon injection or photochromic function type having a shutter speed of less than 100 microseconds, **except** shutters which are an essential part of a high speed camera.

Atomic energy list

A.E.1. Source (fertile) the fissionable materials, including, but not limited to, the following eight items:

(a) Minerals, raw and treated (including residues and tailings), which contain either uranium or thorium or any combination thereof, exceeding 0.05 per cent by weight, as follows:
(i) Ores containing uranium including pitchblende;
(ii) Monazite and monazite sands;
(iii) Ores containing thorium including urano-thorianite;
(b) Natural uranium, unwrought or wrought, including alloys and compounds of natural uranium, having a uranium content exceeding

0.05 per cent, **excepting** medicinals;
(c) Uranium 233, alloys containing uranium 233 and compounds of uranium 233;
(d) Uranium enriched in the isotope 235, alloys containing uranium enriched in the isotope 235, and compounds of uranium enriched in the isotope 235;
(e) Irradiated uranium containing plutonium;
(f) Plutonium, alloys containing plutonium and compounds containing plutonium;
(g) Thorium, unwrought or wrought, and alloys and compounds containing thorium **excluding** alloys containing less than 1.5 per cent of thorium by weight and **except** medicinals;
(h) Irradiated thorium containing uranium 233.

(a) Individual shipments of up to 100 kg of contained thorium in compounds and up to 1 kg of thorium metal;
(b) Individual shipments of up to 1 kg of natural and/or depleted uranium;
(c) Individual shipments of up to 1,000 kg of depleted uranium if contained in shielding specially designed for teletherapy, radiography or radioactive thermo-electric generators, and supplied together with such apparatus;
(d) Subsequent shipments of fuel for civil research and power reactors exported under the Note to Item A.E.36;
(e) Individual shipments of up to 1/100 micro-curie of materials described in (c), (d), (e), (f) *and* (h)*;*
(f) Depleted uranium fabricated in the form of counterweights either installed as integral parts of or supplied as replacements part for aircraft not described in this list.
(g) Individual shipments of up to 100 mg of materials described in (d) *and* (f) *above in the form of targets for nuclear research purposes provided that the material is subject to the Safeguards System of the International Atomic Energy Agency.*
(h) Individual shipments of up to 1,000 kg of thorium nitrate (mantle grade) for use in the production of thoriated gas mantles.

A.E.5. Deuterium and production equipment therefor, as follows:
(a) Deuterium and compounds, mixtures and solutions containing deuterium, including heavy water and heavy paraffins, in which the ratio of deuterium atoms to hydrogen atoms exceeds 1:5,000 by number;
(b) Plant and equipment specially designed for the production and/or concentration of deuterium oxide.

Individual shipments containing up to 10 kg of deuterium, except as limited by sub-item A.E.35 (b);
Subsequent shipments of deuterium for use in reactors exported under the Note to Item A.E.36.

A.E.8. Zirconium metal, alloys containing more than 50 per cent zirconium by weight and compounds in which the ratio of hafnium content to zirconium content is less than one part to 500 parts by weight, and manufactures wholly thereof.

(a) Individual shipments of up to 5 kg of hafnium-free zirconium;
(b) Individual shipments of up to 200 kg of hafnium-free zirconium in the form of foil or strip having a thickness not exceeding 0.00095 in. and specially fabricated and intended for use in photo flash bulbs;
(c) Finished parts of zirconium metal or its alloys specially designed for an identified civil research or power reactor provided that none of the parts contain fissile materials and the importing country has agreed to the application of the safeguards of the International Atomic Energy Agency (IAEA) to the nuclear reactor facility;
(d) One-time shipments not exceeding 100 kg of contained zirconium metal or parts made therefrom when intended for use in or in support of, an identified civil research or power reactor facility over which it is contemplated that IAEA safeguards would be applied.

A.E.11. Nickel as follows:
Powder, having a nickel content of not less than 99 per cent and a particle size of less than 100 microns; and Porous metal having a mean pore size not exceeding 25 microns and a nickel content of not less than 99 per cent **except** single porous nickel metal sheets not exceeding 144 in^2 (930 cm^2) for use in batteries with civil applications.
(See also Item I.L. 1661).

Explanatory Note: Porous nickel as defined above refers to porius metal manufactured from nickel powder as defined above, which has been compacted and sintered to form a metal material with fine pores interconnected throughout the structure.

Nickel powder in uncompacted powder form not made by the carbonyl process.
Individual shipments of up to 50 kg of nickel powder in uncompacted powder form made by the carbonyl process.

A.E.12. Beryllium metal and manufactures wholly thereof, **except** beryllium windows for medical X-ray machines; alloys containing more than 50 per cent of beryllium by weight; oxides and other compounds

Individual shipments of the above products containing up to:
500 g of beryllium of a purity of 99 per cent or less; or
100 g of beryllium (except single crystals), with a purity greater than 99 per cent; or
5 kg of beryllium contained in compounds with a purity of less than 99 per cent.

A.E.14. Fluorine.
Shipments containing up to 25 kg of fluorine

A.E.15. Chlorine trifluoride.
Shipments containing up to 5 kg of chlorine trifluoride

A.E.18. Equipment specifically designed for the separation of isotopes of uranium and/or lithium.

A.E.19. Machines, materials or equipment specially designed for use in the processing of irradiated nuclear materials in order to isolate or recover fissionable materials, such as nuclear reactor fuel chopping machines, countercurrent solvent extractors, and specially designed parts and accessories therefor.

A.E.23. Any plant specially designed for the production of uranium hexafluoride (UF_6).

A.E.24. Valves, 3 cm or greater in diameter, with bellows, seal, wholly made of or lined with aluminium, nickel, or alloy containing 60 per cent or more nickel, either manually or automatically operated.
Metal to metal seat valves for non-atomic energy purposes.

A.E.29. Gas centrifuges capable of the enrichment or separation of isotopes and specially designed parts and equipment for gas centrifuges and gas centrifuges installations.

Gas centrifuges specially designed for industrial use and not suitable for atomic energy production use.

A.E.30. Blowers and compressors (turbo, centrifugal and axial flow types), wholly made of or lined with aluminium, nickel, or alloy containing 60 per cent or more nickel, and having a capacity of 60 cubic feet per minute (1,700 litres per minute) or greater.

A.E.31. Electrolytic cells for the production of fluorine with a production capacity greater than 250 g or fluorine per hour; major components thereof.

A.E.33. Heat exchangers suitable for use in gaseous diffusion plants, i.e. heat exchangers made of aluminium, copper, nickel, or alloy containing more than 60 per cent nickel, or combinations of these metals as clad tubes, designed to operate at sub-atmospheric pressure, with a leak rate of less than 10^{-4} atmospheres per hour under a pressure differential of 1 atmosphere.

A.E.34. Artificial graphite having a boron content of less than or equal to 1 part per million, the total thermal absorption cross section being less than or equal to 5 millibarns per atom.
(See also Item I.L. 1673).

Individual shipments of up to 100 kg. of artificial graphite as specified above;
Subsequent shipments of artificial graphite as specified above in reactors exported as exceptions to Item A.E.36 as defined in the note thereto.

A.E.35. Lithium, as follows:
(a) Metal;
(b) Hydrides, in which lithium, whether normal, depleted or enriched in the 6 isotope, is compounded with hydrogen or its isotopes or complexed with other metals or aluminium hydride;
(c) Alloys, as follows:
(1) Magnesium-based alloys containing 10 per cent or more lithium
(2) Containing 50 per cent or more of lithium either normal or depleted in the 6 isotope; or
(3) Containing any quantity of lithium enriched in the 6 isotope; or
(d) Any other material containing lithium enriched in the 6 isotope, including compounds, mixtures and concentrates.

Shipments containing up to 1 kg. of lithium metal not enriched in the 6 isotope or up to 10 kg. of lithium hydride, either completed with other metals or not, in which the lithium is not enriched in the 6 isotope and is not compounded with the heavier isotopes of hydrogen.

A.E.36. Nuclear reactor, i.e. reactors capable of operation so as to maintain a controlled, self-sustaining fission chain reaction; major components designed or intended for use in a nuclear reactor such as reactor vessels, core support structures, coolant pumps, fuel element handling equipment, heat exchangers and control rod drive mechanisms; power generating and/or propulsion equipment not elsewhere specified, specially designed for use with nuclear reactors.

Civil research and power reactors provided that countries to which they are destined support the International Atomic Energy Agency system of safeguards.

A.E.37. Hafnium metal, and alloys and compounds of hafnium containing more than 15 per cent hafnium by weight.
Shipments of up to 1 kg. of contained hafnium.

A.E.38. Calcium containing both less than one-hundredth (0.01) per cent by weight of impurities other than magnesium and less than 10 parts per million of boron.
Shipments containing up to 25 kg. calcium as defined above.

A.E.39. Tritium, its compounds, and their mixtures in which the ratio of tritium to hydrogen by atoms exceeds one part in 1,000.
Explanatory Notes:
(1) The only compounds and mixtures excluded by this definition are those where the separation of the tritium from its compounds cannot

result in the evolution of an isotopic mixture of hydrogen in which the ratio of tritium to hydrogen by atoms exceeds one part in 1,000.

(2) The quantities of tritium specified below contained in the following specified classes of products are excluded from coverage by this definition:

(a) Labelled compounds not exceeding 100 curies per shipment;

(b) Self-luminous products, gas and aerosol detectors, electron tubes, lightning or static electricity gradient meters, devices designed for the ionisation of air, including static elimination devices, ion generating tubes, detector cells of gas chromatography devices, and calibration standards;

provided that each product or device contains not more than 40 curies of tritium in any chemical or physical form.

Individual shipments containing up to 100 *curies of tritium, except as limited by sub-item* (b) *of A.E.*35*;*

Individual shipments containing up to 500 *curies of tritium when contained in luminous paint, or in a paint constituent; in the form of tritium activated zinc sulphide phosphor in which the tritiating agent is a compound containing part of its chemically bound hydrogen in the form of a tritium isotope.*

A.E.40. Neutron generator tubes designed for operation without an external vacuum system, and utilising electrostatic acceleration to induce a tritium-deuterium nuclear reaction.

Types technically the same as those already exported.

A.E.41. Process control instrumentation specially designed or modified for monitoring or controlling the processing of irradiated fissionable or fertile materials or irradiated lithium.
(See also Item A.E.19).

Industrial list

Group A. Metal-Working Machinery

1016. Grinding heads and spindle assemblies (consisting of spindles and bearings as a minimal assembly) designed or rated for operation at speeds in excess of 120,000 revolutions per minute and machines specially designed for the utilisation of such grinding heads.

Explanatory Note: This definition does not cover hand-held drills.

1072. Presses and specialised controls, accessories and parts therefor, as follows:

(a) Presses (stabilised equipment using rams) for applying high impact energy work forces through use of explosives or compressed gases including air;

(b) Presses specially designed or redesigned for the working or forming of metals, alloys or other materials with a melting point exceeding 1,900° centigrade;

(c) Hydraulic presses as follows:

(i) Vertical presses having a total rated force of over 10,000 tons:

(ii) Horizontal presses having a total rated force of over 5,000 tons.

(d) Isostatic press systems as follows:

(i) capable of achieving a maximum working pressure of 20,000 lb/in² (1,406 kg/cm²) or greater and possessing a chamber cavity with an inside diameter in excess of 16 in. (40.6 cm), or

(ii) capable of achieving a maximum working pressure of 5,000 lb./in². (351 kg./cm²,) or greater, and having a controlled thermal environment within the closed cavity, except those possessing a chamber cavity with an inside diameter of less than 5 in. (127 mm.) and which are also capable of achieving and maintaining a controlled thermal environment only between + 80° centigrade and − 35° centigrade.

Explanatory Note: Isostatic presses are those capable of pressurising a closed cavity through various media (gas, liquid, solid particles, etc.) to create equal force in all directions within the cavity upon a work-piece or material.

(e) Control equipment, accessories and parts which ar specially designed for the above presses.

Hydraulic presses described in sub-item (c) *not specially designed for use in forming aircraft, missile or space vehicle parts, in powder metallurgy or in ceramics production where the total rated force is less than* 30,000 *tons for vertical presses and* 10,000 *tons or less for horizontal presses; and*

Parts included in sub-item (e) *to service presses previously exported under the first part of this note.*

1075. Spin-forming and flow-forming machines, double support or three roller types, as follows:

(a) Horizontal spindle type designed to have and having a drive motor of 80 h.p. (59 kW.) or more;

(b) Vertical spindle type designed to have and having a drive motor of 50 h.p. (37 kW.) or more.

1080. Machines and equipment specially designed for making or measuring gas turbine blades.

1081. Machinery for use in the manufacture of aircraft, as follows:

(a) Machinery specially designed for the working or forming of aircraft sheet, plate or extrusion;

(b) Machinery specially designed for the milling of aircraft skin.

1086. Machines specially designed for the manufacture of jet engines, the following:

(a) Jet engine compressor case boring machines;

(b) Jet engine compressor or turbine disc turning machines;

(c) Jet engine rotor grinders.

1088. Gear making and/or finishing machinery, as follows:

(a) Gear grinding machines, generating type, capable of accepting gear blanks of 36 in. (914 mm.) work diameter or more;

(b) Gear grinding machines, generating type, designed to grind gears to a face-width of 7 in. (177 mm.) or more, for the production of helical or herring-bone gears.

(c) Capable of the production of gears of a module finer than 0.5 mm. (diametral pitch finer than 48) and meeting a quality standard better than DIN 58405 Class 7.

Explanatory Note: If rated in AGMA or Admiralty standards and not rated in DIN 58405, AGMA 10 or Admiralty Class II shall be considered to be the equivalent of DIN 58405 Class 7.

1091. Numerical control systems, as follows:

(a) Units for numerically controlling co-ordinated simultaneous (contouring and continuous path) movements of machine tools and dimensional inspection machines in two or more axes, **except** units having all of the following characteristics:

(i) Hardwired;

(ii) No more than 2 axes can be simultaneously co-ordinated;

(iii) Tape reader speed equal to or less than:

(1) 300 characters per second for non-buffered units, or

(2) 150 characters per second for buffered units;

(iv) Minimum programmable increment equal to or greater than 0.0001 in. (0.002 mm.);

(v) Without interface to allow direct computer input.

(b) Machine tools and dimensional inspection machines equipped or capable, according to the manufacturer's technical specifications, of being optionally equipped with controls covered by sub-item (a) above, **except:**

(i) boring mills, milling machines, and machining centres, having all of the following characteristics:

(1) Maximum slide travel in any axis equal to or less than 8 ft. (2,400 mm.);

(2) Positioning accuracy of any axis equal to or greater than ± 0.0004 in. per foot and 0.0002 in. for each additional foot (± 0.01 mm. per 330 mm. and 0.005 mm. for each additional 300 mm.);

(3) Maximum contouring feed rate for metal cutting equal to or less than 100 in. per minute (2,500 mm. per minute);

(4) Spindle horsepower equal to or less than 25 (20 KiloWatts);

(5) Single spindle head;

(6) Not more than three numerically controlled axes of which no more than two can be simultaneously co-ordinated.

(ii) machine tools (other than the machines described in (i) above) and dimensional inspection machines having all of the following characteristics;

(1) Positioning accuracy of any axis equal to or greater than ± 0.0004 in. per foot and 0.0002 in. for each additional foot (± 0.01 mm. per 300 mm. and 0.005 mm. for each additional 300 mm.);

(2) Not more than three numercially controlled axes of which no more than two can be simultaneously co-ordinated.

(c) Specially designed sub-assemblies which can upgrade the capabilities of numerical control units and machine tools either so that they would be covered by sub-items s(a) or (b) above, or so that they would cease to be covered by the Notes below.

(*a*) *Boring mills, milling machines and machining centres having all of the following characteristics:*

(1) *Maximum slide travel in any axis equal to or less than* 6 *ft.* (1,800 mm.);

(2) *Positioning accuracy of any axis equal to or greater than* ± 0.0004 *in. per foot and* 0.0002 *in. for each additional foot* (± 0.01 *mm. per* 300 *mm. and* 0.005 *mm. for each additional* 300 *mm.);*

(3) *Single spindle head;*

(4) *Maximum contouring feed rate for metal cutting equal to or less* than 100 in. per minute (2,500 mm. per minute);

(5) Spindle horsepower equal to or less than 25 (20 KiloWatts);

(6) *Not more than three numerically controlled co-ordinated simultaneous axes.*

(b) *Machine tools (other than the machines described in sub-paragraph* (*a*) *above) and dimensional inspection machines having all of the following characteristics.:*

(1) *Positioning accuracy of any axis equal to or greater than* ± 0.0004 *in. per foot and* 0.0002 *in. for each additional foot* (± 0.01 *mm. per* 300 *mm. and* 0.005 *mm. for each additional* 300 *mm.);*

(2) *Not more than three numerically controlled co-ordinated simultaneous axes.*

(c) *Numercial control units:*

(1) *Exported with the machine tool or dimensional inspection machine (ie the machine tool or dimensional inspection machine is equipped with a numerical control unit) exportable under the terms of sub-paragraph (a) and (b) of this Note, and*

(2) *Having all of the following characteristics:*

(*i*) *Hardwired;*

(*ii*) *No more than 3 axes can be simultaneously co-ordinated;*

(*iii*) *Tape reader speed equal to or less than 300 characters per second for buffered and non-buffered units;*

(*iv*) *Minimum programmable increment equal to or greater than 0.0001 in. (0.002 mm.);*

(*v*) *Without interface to allow direct computer input.*

Group B. Chemical and Petroleum Equipment

1110. Gas liquefying equipment, as follows:

(a) Equipment for the production of liquid hydrogen, **except** plants with a capacity of less than one-and-a-half tons per 24-hour day and not designed for, or capable of, the production of hydrogen slush;

(b) Equipment for the production of liquid fluorine.

(c) Equipment for helium as follows;

(1) Equipment for the separation of helium from natural gases; and

(2) Equipment specially designed for the production of lambda-phase helium (helium II);

(3) Other equipment for the production of liquid helium, **except**:

(i) Equipment which has a capacity of no more than 20 litres per hour;

(ii) Equipment with piston-expansion machines having a capacity of no more than 50 litres per hour.

Equipment described in (c) (i).

1118. Equipment for the production of military explosives and solid propellants, as follows:

(a) Complete installations;

(b) Specialised components;

(c) Nitrators: continuous types.

1129. Vacuum pumps, as follows:

(a) Turbo-molecular pumps having a higher capacity than 2,000 litres of nitrogen per second;

(b) Diffusion pumps rated for unbaffled pumping speeds of more than 50,000 litres of nitrogen per second at pressures of 10^{-4} mm. of mercury or less;

(c) Cryopump systems (ie systems in which the circulation of liquefied gas is used to achieve a vacuum, either static or dynamic, by lowering the temperature of the environment) designed to operate at temperatures of less than −200°C (−328°F) measured at atmospheric pressure

(d) Specially designed parts, controls and accessories for the above pumps.

1131. Pumps (except vacuum pumps) having any of the following characteristics.:

(a) Designed to move molten metals by electromagnetic forces:

(b) Specially designed for operation at temperatures below −200°C (−328°F).

(c) Having all flow contact surfaces made of 90 per cent or more tantalum, titanium or zirconium, either separately or combined, **except** when such surfaces are made of materials containing more than 97 per cent and less than 99.7 per cent titanium.

(See also Item I.L. 1133).

1133. Valves, cocks and pressure regulators, as follows;

(a) Specially designed for operation at temperatures below −200°C (−328°F); or

(b) Having all flow contact surfaces made of 90 per cent or more tantalum, titanium or zirconium, either separately or combined, **except** when such surfaces are made of materials containing more than 97 per cent and less than 99.7 per cent titanium.

(See also Item 27 on the Atomic Energy List and Item I.L. 1131).

1142. Pipe, tubing and fittings made of, lined with or covered with polytetrafluoroethylene as defined in Item 1754 (a) (1), polyvinylidenefluoride, or the copolymers of tetrafluoroethylene and hexafluoropropylene, chlorotrifluoroethylene and vinylidene fluoride or hexafluoroporpylene and vinylidene fluoride **except:**

(i) Un-reinforced, non heat shrinkable tubing having an inner diameter of 0.125 in. (3.17 mm.) or more;

(ii) Un-reinforced, heat shrinkable tubing having an inner diameter of 1.125 in. (28.57 mm.) or more before shrinkage;

(iii) Reinforced tubing designed for pressures of 1,500 p.s.i. (105.45 kg/sq. cm.) or less, whether or not equipped with fittings; and

(iv) Tubing having an inner diameter of greater than 1 in. (25.4 mm.) which has not been specially processed to make flow surfaces electrically conductive.

1145. Containers, jacketed only, for the storage or transportation of liquefied gases at temperatures below −170° C (−127°F), including mobile units, as follows:

(a) Specially designed for liquefied gases boiling at temperatures below −200°C (−328°F), having a liquid capacity of more than 250 gallons (946 litres) and an evaporation loss rate of less than 3 per cent per day as determined at an ambient temperature of 24°C (75°F) and without exposure to direct sunlight;

(b) Specially designed for liquid fluorine;

(c) Mobile equipment specially designed for liquid oxygen, nitrogen or argon having a capacity exceeding 1,200 gallons (4,542 litres) and an evaporation loss rate of less than 1.5 per cent per day as determined at an ambient temperature of 24°C (75°F) and without exposure to direct sunlight, **except** equipment with multi-laminar type insulation under vacuum.

Containers described in sub-item (c).

Group C. Electrical and Power-Generating Equipment

1203. Electric vacuum furnaces as follows:

(a) Consumable electrode vacuum arc furnaces with a capacity in excess of 5 tons;

(b) Skull type vacuum arc furnaces;

(c) Induction vacuum furnaces, as follows;

(i) cold crucible vacuum induction furnaces designed to operate at pressures lower than 0.1 mm. of mercury and at temperatures higher than 1,100°C (1,203°F);

(ii) other vacuum induction furnaces designed to operate at temperatures higher than 1,650°C (3,002°F);

excluding furnaces with a workpiece space of not more than 13,000 cm.³ and designed to operate at temperatures not higher than 1,900°C (3,452°F). and furnaces with a workpiece space of not more than 3,200 cm. with no single dimension (length, width, height or diameter) of that space in excess of 10 in. and designed to operate at temperatures not higher than 2,300°C (4,172°F);

(d) Resistance vacuum furnaces designed to operate at temperatures higher than 1,650°C (3,002°F), excluding:

(i) furnaces for heat treatment:

(1) up to 12 in. (304 mm.) × 12 in. × 12 in. (28,320 cm.³), designed for temperatures not higher than 2,300°C (4,172°F);

(2) up to 600 cm.³ designed for temperatures not higher than 2,700°C (4,860°F);

(ii) Melting furnaces up to 3,200 cm³ designed for temperatures not higher than 2,300°C (4,172°F);

(e) Specialised parts and controls for the above furnaces.

1204. Electron beam equipment for the deposition of thin film, the coating of thin film, or the working thereof; and specialised parts for the above equipment.

Explanatory Note: It is not intended that this item covers: (a) equipment using the 'sparking technique'. (b) continuous vacuum roll coating machines having a voltage in excess of 20 KiloWatts, having a fixed electron beam gun and no accurate control of the thickness of the deposited layer.

1205. Electrochemical, semi-conductor and radio-active devices for the direct conversion of chemical, solar or nuclear energy to electrical energy, as follows:

(a) Electrochemical devices, as follows:

(1) Fuel cells operating at temperatures of 200°C (392°F) or less, including regenerative cells, ie cells for generating electric power to which all the consumable components are supplied from outside the cell;

Explanatory Note: The temperature of 200°C (392°F) or less is intended to refer to the fuel cell and not to the fuel conditioning equipment, which may be either an ancillary or an integral part of the fuel cell battery and which may operate at over 200°C (392°F).

(2) Primary cells and batteries having any of the following characteristics:

(i) possessing a means of activation and having an open circuit storage life in the unactivated condition, at a temperature of 21°C (70°F) of 10 years or more;

(ii) capable of operating at temperatures from below −25°C (−13°F) to above 55°C (131°F) including cells and cell assemblies (other than dry cells) possessing self-contained heaters;

(iii) Utilising a lithium anode with lithium salt solute in organic solvent (non aqueous) electrolyte and having an energy density at the 24-hour discharge rate of greater than 100 Watt-hours per pound at 24°C (73°F) and greater than 35 Watt-hours per pound at −29°C (−20°F).

Explanatory Note: Energy density is obtained by multiplying the average power in watts (average voltage times average current in amperes) by the duration of the discharge in hours to 90 per cent of the initial load voltage and dividing by the total weight of the cell (or battery) in pounds. As regards secondary (rechargeable) batteries, energy density is measured after 500 charge/discharge cycles.

(3) Mechanically rechargeable leak-proof batteries having cells with removable zinc plates with porous air electrodes and immersed in electrolyte of potassium hydroxide;

(4) Molten salt electrolyte cells and batteries which normally operate at temperatures of 150°C (302°F) or below;

(b) Photo-voltaic cells:

(1) With a power output of 8 MilliWatts or more per sq. cm. under 100 MilliWatts per sq. cm. tungsten (2,800°K) illumination; or

(2) All gallium arsenide photo-voltaic cells excluding those having a power output of less than 4 MilliWatts measured by the above technique; or
(3) With a power output of 450 MilliWatts or more per sq. cm. under 10 watts per sq. cm. silicon carbide (1750°K) illumination;

(c) Power sources other than nuclear reactors based on radio-active materials systems, excluding:
(i) those having an output power of less than 0.5 watt and a total weight of more than 200 lb;
(ii) those specially designed and developed for medical use within the human body.

(See also Items I.L. 1550 and I.L. 1570).

(d) Specialised parts, components and sub-assemblies of the above devices.

(See also sub-Items I.L. 1570 (c) and (d).)

Fuel cells described in sub-item (a) (1) above, as follows: With a maxmum operating temperature of 100°C (212°F) *using gaseous pure hydrogen and oxygen/air reactants, alkaline electrolyte, and a catalyst support by carbon either pressed on a metal mesh, electrode, or attached to a conducting porous plastic.*

Equipment described in sub-item (c) having an overall efficiency of 6 per cent or less (obtained by dividing the electrical output, expressed in watts, by the thermal input, expressed in watts, this efficiency to be measured at the beginning of life), and an output power of 0.5 *watts or more.*

1206. Electric arc devices for generating a flow of ionised gas in which the arc column is constricted **(except** devices wherein the flow of gas is for isolation purposes only and devices of less than 100 KiloWatts for cutting, welding, melting, plating and/or spraying); equipment incorporating such devices; specially designed parts, accessories and control or test equipment for such devices.

Group D. General Industrial Equipment.

1305. Metal rolling mills, as follows:

(a) Sheet and strip mills more than 3-high (including dual-purpose mills which can operate as either 2- or 4-high) which achieve special lateral and/or longitudinal contour control by one or more of the following means:
(1) Work rolls having a ratio of roll face length to roll diameter which exceeds either:
6:1 for rolls with roll face length up to and including 30 in. (762 mm.) or
5:1 for rolls with roll face length exceeding 30 in. (762 mm.);
(2) Work roll contour control achieved by concurrent deforming of back-up rolls, back-up shafts or work rolls;
(3) Any other feature achieving special lateral and/or longitudinal contour controls comparable to those achieved by (1) and (2) above;

(b) Mills, specially designed or redesigned for the rolling of metals and alloys with a melting point exceeding 1,900°C.

(c) Specialised controls, parts and accessories for the above mills.

Explanatory Note: Sub-item (a) above relates to technical developments which materially increase the capability of mills to meet the exceptionally close tolerances required for military needs.

Hot mills possessing any of the characteristics described in sub-item (a), if these characteristics do not present an improvement in kind and/or quality on similar devices incorporated into operating mills of the same type and size prior to January 1 *of the year three years preceding the year of the proposed export.*

Cold mills possessing any of the characteristics described in sub-item (a), if these characteristics do not present an improvement in kind and/or quality on similar devices incorporated into any operating cold mill before January 1 *of the year three years preceding the year of proposed export.*

All controls, parts and accessories for the above mills.

Explanatory Note: The term 'improvement in kind and/or quality' applies only to technical developments resulting in a material increase in efficiency or reliability to achieve exceptionally close tolerances in lateral and/or longitudinal contour required for military purposes.

1352. Machinery specially designed for the extrusion of tetrafluorethylene polymer and copolymer coagulated dispersions or powders or pastes derived therefrom, and parts and components therefor, and other machinery specially designed for the manufacture of wire and cable described in sub-item 1754 (c).

1353. Equipment specially designed for the manufacture of communication cable described in Item 1526.

Equipment specially designed for the manufacture of cable described in sub-items 1526 *(b) abd* 1526 *(c).*

1355. Machinery and equipment for the manufacture of electronic equipment, components and materials and related test gear, parts and specialised controls and accessories, as follows:

(a) For tubes (valves) and parts and sub-assemblies thereof:
(1) Equipment specially designed for the manufacture of types described in this list, and
(2) equipment for automatic or semi-automatic assembly, testing and/or sorting, **except** standard equipment for the assembly of entertainment-type receiver tubes or television picture tubes not described in Item I.L. 1541.

Explanatory Note: The term 'automatic' refers to machinery not requiring the assistance of a human operator to complete its function or functions during each complete cycle of operations.

The term 'semi-automatic' refers to machinery requiring the assistance of a human operator to complete part but not all of its functions during each complete cycle of operations.

The term 'functions' above does not include the initial loading or final unloading of material from the machine.

(b) For semi-conductor devices, electronic equipment and components described in Item I.L. 1564(a) and (c), and parts, materials and sub-assemblies thereof;
(1) Equipment specially designed for the manufacture of such types and of any silicon transistor;
(2) Equipment for slicing, dicing, scribing, slice breaking, polishing probing, testing and/or sorting;
(3) Bonders and welders;
(4) Masks;
(5) Equipment for the manufacture of masks of the creation of a photosensitive pattern on the surface of a semi-conductor or insulating substrate; and
(6) Equipment for purifying or processing semi-conductor materials, except equipment specially designed for the zone purification of germanium.

Explanatory Note: It is understood that equipment for purifying and processing includes equipment which performs one or more of the following operations on semi-conductor materials.
(a) purifying beyond 99.9 per cent;
(b) equalising distribution of residual impurities;
(c) achieving controlled introduction of impurities (in one or more stages of operation);
(d) producing monocrystalline material or forms (eg by drawing, pulling, deposition) including forming on substrates;

(c) For depositing or printing on insulating materials or otherwise forming, *in situ*, component parts other than basic wiring.

Equipment described in sub-item (a) (2).

1356 Machinery for the working of synthetic film used as a dielectric (condenser tissue) or as magnetic recording tape, as follows:

(a) Vacuum metallising machinery specially designed for the continuous strip roll coating with metallised sheathing or synthetic film used as a dielectric in capacitors embargoed by Item 1560, capable of being used with any of the following devices, whether or not equipped with such devices:
(1) Cutting devices for slitting the film into strips suitable for capacitors;
(2) Shadow masks or similar devices to achieve uncoated strips;
(3) Controls for the automatic correction of the coating process;
(4) Special devices to burn out the metal deposit on pinholes to prevent electrical faults in the capacitors;

(b) Specialised components and parts for the above machinery;

(c) Equipments, components and parts specially designed for the continuous coating of polyester base magnetic tape intended for the equipments described in Item 1572.

1357. Machines of which the motions for positioning, wrapping and winding of fibres are co-ordinated and programmed in three or more axes, specially designed to fabricate composite structures or laminates from fibrous and filamentary materials and the mechanical parts of the machines, co-ordinating and programming controls, and specialised parts, components and accessories therefor.

1358. Machinery and equipment specially designed for the manufacture of devices and assemblies thereof covered by sub-items 1588(b), (c), (d) and (e) and for magnetic recording media other than tape covered by sub-item 1572 (d) (for magnetic tape equipment, see Item 1356), as follows:

(a) Equipment for the manufacture of single and multi-aperture forms covered by sub-items 1588 (b), (c) and d), as follows:
(1) Automatic presses;
(2) Press dies;
(3) Automatic equipment for monitoring grading, sorting, exercising and/or testing;

(b) Equipment for the manufacture of thin film memory storage or switching devices having square hysteresis loops and automatic equipment for monitoring, grading, sorting, exercising and/or testing of devices covered by sub-item 1588(e);

(c) Automatic equipment for monitoring, exercising and/or testing assemblies of devices covered by sub-items 1588(b), (c), (d) and (e);

(d) Equipment for the application of magnetic coating to recording media covered by sub-item 1572(d);

(e) Automatic and semi-automatic equipment for monitoring, grading, exercising and/or testing recording media covered by sub-item 1572 (d);

(f) Specialised test equipment, parts and controls for the above.

Explanatory Notes:
(1) The term 'automatic' refers to machinery not requiring the assistance of a human operator to complete its function or functions during each complete cycle of operations.
(2) The term 'semi-automatic' refers to machinery requiring the assistance of a human operator to complete part but not all of its function during each complete cycle of operations.
(3) The term 'functions' in Notes 1 and 2 does not include the initial loading or final unloading of material from the machine.

1361. Wind tunnels, as follows:

(a) Supersonic (Mach 1.4 Mach 5.5) hypersonic (Mach 5.5 to Mach 15) and hypervelocity (above Mach 15) wind tunnels, except wind tunnels specially designed for educational purposes and having a test section size (measured internally) of less than 10 in. (25 cm.);

(b) Devices for simulating environments at velocities of Mach 1.4 and above, including hot shot tunnels, plasma arc tunnels, shock tunnels, shock tubes, gas tunnels and light gas guns;

(c) Specially designed parts and accessories for the above equipment.

Explanatory Note: The term 'test section size' refers to the diameter of the circle, the side dimension of the square, or the longer side dimension of the rectangle constituting possible shapes of the test section.

Supersonic wind tunnels which are capable of Mach velocities of 1.4 *or more but less than* 4, *and are not specially designed for or fitted with means of preheating the air.*

1362. Vibration testing equipment (**except** mechanical types) capable of providing a thrust greater than 2,000 lb. (900 kg.) and specialised ancillary equipment therefor.

Group E Transportation Equipment

1416. Vessels as follows:

(a) Hydrofoil vessels;

Hydrofoil vessels not possessing significant rough water capability or amphibious qualities provided the vessels are for normal civilian use and do not incorporate advanced techniques.

(b) Sea-going vessels, including sea-going fishing vessels and coasters, and hulls therefor, designed for speeds of over 26 knots when in full load (design) condition, taking into consideration hull form (configuration) as well as power plant;

(c) Vessels with hulls and propulsion machinery made wholly of primarily of non-magnetic materials;

(d) New ships with decks and platforms specially designed or strengthened to receive weapons.

(e) The Department of Trade and Industry should be consulted about any vessel incorporating any item in this Schedule, or having arrangements for demagnetisation.

(See also item ML9)

1430. Buoyant electric conducting cable suitable for sweeping magnetic mines.

1431. Gas turbine engines for marine propulsion of 3,500 rated shaft horse-power or more, whether originally designed as such or adapted for such use from aero-engines.

1460. Aircraft and helicopters, aero-engines and aircraft and helicopters equipment, as follows:

(a) Helicopters over 10,000 lb. (4530 kg.) empty weight and power transmission systems therefor;

Explanatory Note: Empty weight is understood to include normal installation and normal minimum crew, but does not include fuel or pay-load.

(b) Aircraft and helicopters (other than those covered by sub-item (a) above), **except** those not containing any Munitions List items and which are of types and series which are in bona fide normal civil use.

(c) Aero-engines, **except:**

(i) Piston engines:

(ii) Jet engines of less than 5,000 lbs. (2,265 kgs.) thrust;

(iii) Turbo-prop or turbo-shaft engines of less than 2,500 horsepower and with a residual thrust of less than 1,000 lbs. (453 kgs.);

(iv) Those for use in bona fide civil air-craft and helicopters;

(d) Ground and airborne equipment developed solely or used mainly for aircraft and helicopters **except** ground or airborne equipment of types in normal civil use.

(**But** see also Items I.L. 1485, I.L. 1501 and M.L. 10).

1485. Compasses, gyroscopes, accelerometers and inertial equipment, as follows:

(a) Gyro compasses possessing one or more of the following characteristics:

(1) automatic correction for the effects on compass accuracy of changes in ship's speed, acceleration, or latitude, other than manually set mechanical corrective devices;

(2) provisions for accepting ship's data as an electrical input;

(3) provision for setting in corrections for current set and drift;

(4) utilisation of accelerometer, rate gyro, rate integrating gyros, or electrolytic levels as sensing devices;

(5) provisions for determining and electrically transmitting ship's level reference data (roll, pitch) in addition to own ship's course data;

(b) Integrated flight instrument systems for aircraft which include gyro-stabilisers and/or automatic pilots;

Explanatory Note: An integrated flight instrument system is a primary instrument display system of attitude and azimuth with facilities for giving manoeuvre guidance information to the pilot and often integrated with an auto-pilot to the extent of embodying a common unit for setting up the required demands.

(c) Gyro-astro compasses and other devices which derive position and/or orientation by means of automatically tracking celestial bodies;

(d) Gyro-stabilisers used for other purposes than aircraft control except those for stabilising an entire surface vessel;

(e) Automatic pilots used for other purposes than aircraft control, **except** marine types for surface vessels;

(f) Accelerometers with a threshold of 0.005 g or less and/or a linearity of less than 0.25 per cent of output over the operating range, which are designed for use in inertial navigation systems or in guidance systems of all types;

(g) Gyros and gyro-compasses, as follows:

(1) gyros with a rated free directional drift rate (rated free precession) of less than 0.5 degree (1 Sigma or r.m.s) per hour in a 1 g environment;

(2) gyro compasses which incorporate gyros described in sub-item (g) (1) above or which, when operated in a gyro compass mode, have a compass error, before compensation, due to gyro drift of less than 1/30 of a radian ($6/\pi$ degrees of 1.918 degrees approximately) at 0 degrees latitude;

(h) Inertial equipment using accelerometers described in sub-item (f) above and/or gyros described in sub-item (g) (1) above, and systems incorporating such equipment.;

(i) Specially designed parts, components and test calibration and alignment equipment for the above, **except** for the specific equipment exported under the Note to (b) below.

Equipment described in sub-item (b) provided:

(1) *They are of types and series which have been in normal civil use for more than two years and are standard equipment of aircraft excluded from control under Item I.L.* 1460.

(2) *The equipment is to be installed in civil aircraft.*

Group F. Electronic Equipment including Communications and Radar

See also Item M.L.11.

1501. Communication, navigation, direction finding and radar equipment: See also sub-items M.L.20(b) and M.L.20(c) and sub-items I.L. 1485(b) and I.L. 1485(h).

(a) Airborne communication equipment and specialised parts and components therefor.

Standard commercial airborne equipment needed to equip civil aircraft or as normal standard equipment incorporated in civil aircraft being exported for civil commercial use provided that it contains none of the following characteristics:

(1) *Designed to operate at frequencies greater than* 156 *MegaHertz;*

(2) *Designed for Single Side Band Operation;*

(3) *Incorporating facilities for:*

(*a*) *the rapid selection of more than* 200* *channels per equipment or*

(*b*) *providing a multiplicity of alternative output carrier frequencies controlled by a lesser number of piezoelectric crystals and not forming multiples of a common control frequency;*

(4) *Pressurised throughout;*

(5) *Rated for continuous operation over a range of ambient temperatures extending from below* $-55°C$ *to above* $+55°C$;

(6) *Designed for modulating methods employing any firm of digital modulation using time and frequency redundancy such as 'Quantised Frequency Modulation' (QFM);*

* *Applications for licences for equipment operating in the frequency range* 108-136 *MegaHertz incorporating facilities for the rapid selection of* 560 *channels or fewer at not less than* 50 *KiloHertz channel spacing will be considered if the equipment has been in normal civil use for at least one year.*

(b) Navigation and direction finding equipment (and specialised parts and accessories, specialised testing or calibrating equipment and training or simulating equipment, not elsewhere specified therefor), as follows;

(1) airborne navigation equipment and direction finding equipment as follows:

(i) Designed to make use of 'Doppler' frequency phenomena;

(ii) Utilising the constant velocity and/or the rectilinear propagation characteristics of electromagnetic waves having frequency less than $4-10^{14}$ cycles per second (0.75 microns);

(iii) Radio altimeters the following:

(a) Pulse modulated;

(b) Frequency modulated having an electrical output accuracy better than $\pm$ 3 ft. over the whole range between 0 to 100 ft. or + 3 per cent above 100 ft.;

(c) Frequency modulated which have been in normal civil use for less than two years.

(iv) Direction finding equipment operating at frequencies greater than 5 MegaHertz other than equipment designed for search and rescue purposes provided that the receiver operates on a crystal controlled fixed frequency of 121.5 MegaHertz and that the determination of the D.F. bearing is not independent of the heading of the aircraft and provided that the D.F. antennae array is designed for operation at a fixed frequency of 121.5 MegaHertz.

(v) Pressurised throughout;

(vi) Rated for continuous operation over a range of ambient temperature extending from below $-55°C$ to above $+55°C$.

Navigation equipment described in sub-item b (1)(*i*) *provided that it is to be installed in Civil aircraft or helicopters, and is normal standard equipment of a type installed in civil aircraft or helicopters.*

Standard commercial airborne equipment, of the kind described in sub-items (*b*) (1) (*ii*) *and* (*iii*), *needed to equip civil aircraft, or as normal standard equipment in civil aircraft being exported for civil commercial use, pro-*

vided that such equipment is equivalent in all characteristics and performance to standard equipment of aircraft not covered by this Schedule, and which:

(a) for equipment covered by sub-item 1501(*b*)(1)(*ii*)*, is in conformity with ICAO standards and assures no function exceeding those resulting from such standards, and is not designed to make use of hyperbolic grids at frequencies greater than* 3 *MegaHertz,**

(b) for equipment covered by sub-item 1501 (*b*)(1)(*iii*) *are frequency modulated radio altimeters which have been in normal civil use for a period of more than one year.*

** Applications to export standard commercial airborne equipment designed to make use of hyperbolic grids at frequencies of less than* 3 *MegaHertz will be considered if co-ordinate conversion equipment, which has been in normal civil use for less than one year, or which could not be shipped under the provisions of item* 1565 *is not included and is not separately supplied.*

(2) ground and marine equipment for use with airborne navigation equipment utilising the constant velocity and/or the rectilinear propagation characteristics of electromagnetic waves having frequency less than 4×10^{14} cycles per second (0.75 microns);

Ground equipment for use at civil airports or for civil use in association with airborne equipment described in the Note to sub-item (*b*) (1) (*ii*) *above, provided that such equipment:*

is in conformity with ICAO standards and assures no function exceeding those resulting from such standards; and

is not designed to make use of hyperbolic grids at frequencies greater than 3 *MegaHertz.*

(3) ground and marine direction finding equipment operating at frequencies greater than 12 MegaHertz.

Equipment described in (*b*) (3)*, when:*

(a) the equipment is to be installed at civil airports or for use on civil air routes;

(b) the equipment is designed to operate at frequencies between 12 *MegaHertz and* 157 *MegaHertz, excluding single side band equipment;*

(c) the equipment employs a loop system or a system employing a number of spaced vertical aerials uniformly disposed around the circumference of a circle, excuding electronically commutated types.

(c) Radar equipment, and specialised parts and accessories, specialised testing or calibrating equipment and training or simulating equipment therefor, as follows:

(1) airborne radar equipment.

Equipment covered by this sub-item when it is to be installed in civil aircraft, and which:

(a) has been in normal commercial service for at least one year;

(b) is specially designed for use as a commercial weather radar;

(c) is a normal and reasonable equipment for such civil aircraft;

(2) Ground and marine radar equipment having one or more of the following features:

(i) Operating at a frequency not in normal civil use or at a frequency of more than 10.5 GigaHertz;

(ii) operating at a frequency of less than 3.5 GigaHertz and having a peak output power from the transmitter greater than 1 MegaWatt; or operating at a frequency over the range of 3.5-10.5 GigaHertz and having a peak output power from the transmitter greater than 250 KiloWatts:

(iii) operating at a frequency of less than 3.5 GigaHertz and having a 80 per cent or better cumulative probability of detection* for a 10 square metre target at a free space range of 120 nautical miles; or operating at a frequency over the range of 3.5-10.5 GigaHertz and having 80 per cent or better cumulative probability of detection for a 20 square metre target at a free space range of 60 nautical miles.

(iv) Utilising other than pulse modulation with a constant and/or staggered pulse repetition frequency in which the carrier frequency of the transmitted signal is not changed deliberately between groups of pulses, from pulse to pulse, or within a single pulse;

(v) Utilising a Doppler technique for any purpose other than M.T.I systems using a conventional double or triple pulse delay line cancellation technique;

(vi) Including signal processing techniques which have been in normal civil use for a period of less than two years;

(vii) Having been in commecial use for a period of less than one year.

Secondary radar equipment described in sub-item (*c*) *above designed for civil air traffic identification and control purposes.*

Radar equipment described only in sub-items (*c*)(2)(*i*)*,* (*ii*) *and/or* (*iii*) *above, provided that both of the following conditions are met;*

(i) it is specially designed for the surveillance and co-ordination of airfield surface traffic; and

(ii) it is to be installed at airports operating scheduled commercial flights.

Radar equipment described only in sub-items (*c*)(2)(*ii*) *and/or* (*iii*) *above, provided that all of the following conditions are met:*

(i) operating frequency is less than 3.5 *GigaHertz.*

(ii) peak output power from the transmitter does not exceed 2.5 *MegaWatts;*

(iii) the cumulative probability of detection for a* 10 *square metre target is* 80 *per cent at a free space range not exceeding* 200 *nautical miles;*

(iv) pulse repetition frequency exceeds 300 *pulses per second;*

(v) it is to be installed for air traffic control of scheduled international commercial flights.

Explanatory Note:

*The cumulative probability of detection is determined according to the following parameters:

(1) Radial closing velocity of the target: 2,000 ft. per second (610 metres per second);

(2) Probability of false alarm: 10^{-8};

(3) Operator factor: 3 decibel;

(4) Fluctuation of the target in accordance with Rayleigh distribution.

1502. Communication, detection or tracking equipment of a kind using ultra-violet radiation, infra-red radiation or ultrasonic waves; and specialised parts therefor.

Infra-red geodetic equipment covered by this item, provided that the equipment is rated for measuring distances not exceeding 2,187 *yards* (2,000 metres) *and that it uses a reflector of the cathadioptric type.*

Explanatory Note: This item is not intended to cover industrial equipment employing cells not described in Item I.L. 1548 or I.L. 1550, nor to cover cells and ultrasonic devices which operate in contact with a controlled material to be inspected or when the properties of materials are to be analysed. The item does not cover uses for industrial cleaning, sorting or materials handling, industrial and civilian intrusion alarms, traffic and industrial movement control, counting systems, medical applications, simple educational or entertainment devices, or flame detectors for industrial furnaces.

See also Items M.L.15 and I.L. 1555.

1507. 'Jamming' apparatus (ie apparatus specially designed to jam or otherwise interfere with radio reception); and specialised parts therefor.

1510. Location apparatus, underwater: apparatus for detecting or locating objects under water by magnetic or acoustic or ultrasonic methods, and specialised components of such apparatus, **except** marine depth sounders of a kind used solely for measuring the depth of water or the distance of submerged objects or fish and/or whales vertically below the apparatus.

Horizontally operating apparatus for fish and/or whale finding.

1514. Pulse modulators capable of providing electric impulses of peak power exceeding 2.4 MegaWatts or of a duration of less than 0.1 microsecond, or with a duty cycle in excess of 0.002; and pulse transformer, pulse-forming equipment or delay lines being specialised parts of such modulators.

1516. Panoramic and/or digitally controlled radio receivers which search or scan automatically a part of the electromagnetic spectrum and indicate or identify the received signals; and specialised parts and accessories therefor, as follows:

(a) Panoramic radio receivers **except** ancillary equipment for commercial receivers with which the frequency spectrum searched does not exceed either ± 20 per cent of the intermediate frequency of the intermediate frequency of the receiver or ± 2 MegaHertz.

(b) Digitally controlled radio receivers in which the switching operation takes less than 50 milliseconds.

Explanatory Notes: This item is not intended to cover

(a) Radio frequency analysers (see Item IL 1533) or field strength meters (see Item IL 1529).

(b) Non-ruggedised receivers capable of digital control of frequency selection, in which the frequency spectrum coverage is confined to the range from 325 KiloHertz to 32 MegaHertz and in which the switching operation does not take less than 10 milliseconds.

(c) Non-ruggedised digitally controlled pre-set type radio receivers designed for use in civil communications which have 200 selective channels or fewer.

1517. Radio transmitters and components (**except** radio link and relay equipment) as follows:

(a) Transmitters or transmitter amplifiers designed to operate at output frequencies greater than 235 MegaHertz, **other than**

(i) television broadcasting transmitters and amplifiers therefor operating between 470 and 960 MegaHertz;

(ii) frequency-modulated and amplitude-modulated ground communications equipment for use in the land mobile service and operating in the 420 and 470 MegaHertz band, with a power output of not more than 25 watts for mobile units and 100 watts for fixed units;

(iii) amplitude-modulated radiotelephone equipment used for search and rescue work operating on a frequency of 243 MegaHertz with a carrier power not exceeding 100 milliwatts.

(b) Transmitters or transmitter amplifiers designed to provide any of the following features:

(1) any system of pulse modulation (this does not include amplitude, frequency or phase modulated television or telegraphic transmitter);

(2) rated for operation over a range of ambient temperatures extending from below −40°C to above +55°C;
(3) designed to provide a multiplicity of alternative output frequencies controlled by a lesser number of piezo-electric crystals, **except** equipments in which the output frequency is selected only by manual operation either on the equipment or on a remote control unit and:
(i) those forming multiples of a common control frequency, or
(ii) those in which the output frequency is a multiple of a common frequency which is not less than 1/1,000th part of the oscillator frequency and is in steps of 1 KiloHertz or greater;

Equipment for use in specific civil communications stations known to the exporting country, in which either:

(a) the output frequency is a multiple of a common frequency which is not less than 1/100,000th part of the oscillator frequency, is in steps of 10 Hertz or greater, and is confined to the range from 325 KiloHertz to 32 MegaHertz; or

(b) the output frequency is not greater than 156 MegaHertz, is derived from one or more common frequencies, and can be adjusted in steps of not less than 25 KiloHertz.

(c) Components and sub-assemblies, including but not limited to intermediate-frequency and power amplifiers and their parts, modulator and modulation amplifiers, aerials, their filters and their connecting devices, control equipment placed in racks, and maintenance equipment, specially designed for transmitters covered by sub-items (a) and (b) above, except quartz crystals which are covered by Item IL 1587.

Systems containing transmitters or transmitter amplifiers embargoed by this item but having an output power of not more than 10 watts, which are specially designed for carrying the information of industrial and civilian intrusion detection and alarm systems, traffic and industrial movement control and counting systems, or environmental pollution of air or water detection systems.

Radio microphones embargoed by this item specially designed for theatrical use with a rated output power not exceeding 50 milliwatts.

1518. Telemetering and telecontrol equipment suitable for use with aircraft (piloted or pilotless), space vehicles or weapons (guided or unguided), and test equipment specially designed for such equipment.

Explanatory Note: This item is not intended to cover equipment and parts therefor specially designed to be used for remote control of toys such as model planes and boats and having electric field strength of no more than 200 microvolts per metre at a distance of 500 metres.

1519. Data communication equipment employing digital transmission with digital input and output, including telegraphic and data transmission, having any of the following characteristics:

(a) Designed for operation at a data signalling rate in bits per second, excluding servicing and administrative channels, numerically exceeding either:
(i) 1,200; or
(ii) 65 per cent of the channel (or sub-channel) bandwidth in Hertz;
(b) Employing automatic error detection and correction systems having both of the following characteristics:
(i) re-transmission is not required for correction;
(ii) transmission speed exceeding 300 bits per second;
(c) Components, accessories and sub-assemblies, specially designed for the above equipment.

Explanatory Notes: 'Data signalling rate' is as defined in the ITU Recommendation 53-56, taking into account that for non-binary modulation systems 'bauds' and 'bits per second' are not equal. Bits for coding, checking and synchronisation functions are to be included.

In the case of systems designed to operate in once voice channel, 'bandwidth' will be as defined in CCITT. Recommendation G.131, namely 3,100 Hertz. In the case of CCITT or CCIR voice frequency telegraph systems, 'bandwidth' may be considered as the number of channels times the channel spacing.

Equipment described in sub-item (a) above and components, accessories and sub-assemblies therefor, to member countries of CCITT provided that:

It is to be permanently installed in a circuit operated by the civilian authorities of the importing country, and is to be used for general civil traffic; and

The data signalling rate in bits per second, excluding servicing and administrative channels, does not numerically exceed either 2,400 or 80 per cent of the channel (or sub-channel) bandwidth in Hertz.

1520. Radio relay communications equipment, as follows:

(a) Equipment employing tropospheric, inosopheric or meteoric scatter phenomena, and specialised test equipment therefor;
(b) Other radio relay equipment designed for use at frequencies exceeding 300 MegaHertz, **except** equipment having none of the following characteristics:
(i) designed for use at frequencies exceeding 470 MegaHertz;
(ii) power output exceeding 10 watts;
(iii) signal bandwidth at the input to the modulator exceeding the limit specified in sub-item 1523(a);
(iv) for other than fixed service;
(c) Components, accessories and sub-assemblies, specially designed for the above equipment.

Equipment described in sub-item (b) above and components, accessories and sub-assemblies therefor, provided that:

It is specially designed for the transmission of television signals between camera and studio or between studio and broadcast transmitter and not exceeding a line of sight distance with respect to any one installation; or

It is designed for member countries of the CCIR and

(i) is to be permanently installed in a circuit operated by the civilian authorities of the importing country and is to be used for civil television transmission (including closed circuit television) or for general civil traffic; and

(ii) no equipment described in sub-item I.L. 1523 (b) and exceeding the limits specified in the note to Item 1523, is included.

1521. Amplifiers, oscillators and related equipment, as follows:

(a) Amplifiers designed to operate at frequencies in excess of 500 MegaHertz;
(b) Tuned amplifiers having a bandwidth which exceeds 10 MegaHertz or 10 per cent of the mean frequency, whichever is less, **except** those specially designed for use in community television distribution systems, or for use in radio communications equipment in the HF band below 30 MegaHertz;
(c) Untuned amplifiers having a bandwidth which exceeds 10 MegaHertz, but **excluding** those having a bandwidth up to 30 MegaHertz provided the power output does not exceed 5 watts;
(d) Direct current amplifiers, amplifying by whatever means, having a noise level (referred to the input circuit) of 10^{-16} watts or less and/or a zero drift in 1 hour corresponding to a change in input power of 10^{-16} watts or less:
(e) Parametric amplifiers with a noice figure of merit of 5 decibels or less measured at a temperature of 17°C (63°F) paramagnetic amplifiers; other amplifier or oscillator devices such as Masers (but excluding Lasers), which amplify or oscillate by means of stimulated electromagnetic radiation; specially designed parts therefor; any equipment containing such amplifiers, oscillators or devices.

(For lasers see Item 1522).

Explanatory Notes:

(a) The bandwidth is defined as the band of frequencies over which the power amplification does not drop to less than one-half of its maximum value. The mean frequency is defined as the arithmetic mean between the frequencies at which the power amplification is one-half of its maximum value;
(b) It is not intended that sub-item (d) should cover electrometers incorporating vibrating reed type DC amplifiers.

Equipment containing amplifiers or oscillators described in sub-item (e) above:

(a) specially designed for medical applications;

(b) having an output power of not more than 10 watts, which is specially designed for industrial and civilian intrusion detection and alarm systems, traffic and industrial movement control and counting systems, environmental, pollution of air or water detection system, or for simple educational devices.

1522. Lasers and specially designed components and parts therefor and any equipment containing lasers.

Explanatory Note: The term 'specially designed components and parts' in the above definition is intended to include the active component in semi-fabricated form as well as fabricated forms.

(a) Continuous wave, helium-neon gas lasers operating in the visible spectrum and with a rated minimum output power of 25 milliwatts or less;

(b) Continuous wave argon lasers with a minimum rated output power of 2 watts or less;

(c) Continuous wave CO_2 lasers with a rated minimum output power of 500 watts or less in which the beam, electrical excitation and gas flow, if any, are in the same direction;

(d) Equipment containing lasers as set forth in (a), (b) and (c) above, which is specially designed for industrial and civilian intrusion detection and alarm systems, medical applications and simple educational devices, traffic and industrial movement control and counting systems, and for detection of environmental pollution of air or water;

(e) Optical spectrometers containing or employing as their monochromatic sources lasers whose rated minimum output power does not exceed 2 watts;

(f) Specially designed components, parts and spares for the above.

1523. Single and multi-channel communications transmission equipment, including line or radio terminal, modem, multiplex, and intermediate amplifier or repeater equipment, as follows:

(a) Employing analogue techniques, including frequency division multiplex (FDM), designed to deliver, carry or receive frequencies higher than 150 KiloHertz into, or in, a communications system, **except** carrier communications terminals specially designed for power lines and operating at frequencies below 1,500 KiloHertz;
(b) Employing digital transmission with analogue input and output, including pulse code modulation (PCM), designed for use on communication circuits, and specialised test equipment therefor;
(c) Components, accessories and sub-assemblies, specially designed for the above equipment.

Equipment described in sub-item (a) above, and components, accessories and sub-assemblies therefor, as follows:

(a) *equipment to be installed in circuits directly connecting densely populated industrial areas in countries listed in the preamble with communications systems elsewhere, provided that the terminal and intermediate amplifier or repeater equipment is designed to deliver, carry or receive not more than 60 voice channels of 4 KiloHertz each;*

(b) *Equipment specially designed for the transmission to television signals by cable between camera and studio and studio and broadcast transmitter not exceeding 50 miles for a link with respect to any one installation; (For radio relay links see Item I.L. 1520.)*

(c) *Equipment for other than submarine use provided that it is destined for a member of the CCITT and is to be permanently installed in a circuit operated by the civilian authorities of the importing country and is to be used for civil television transmission (including closed circuit television) or for general civil traffic, as follows:*

(i) *Using video techniques designed to deliver, carry or receive one monochrome or colour television signal with a maximum nominal video bandwidth of 6 MegaHertz and associated sound signals;*

(ii) *Designed to deliver, carry or receive not more than 960 voice channels of 4 KiloHertz each.*

1526. Communications cable, as follows:

(a) Submarine cable;

(b) Coaxial cable using a dielectric aired by discs beads, screw, spiral, or other means, **except** those having four or fewer cores none of which has an inner diameter of the outer conductor of more than 12 mm. (0.472 in.);

(c) Secure communications cable, being either coaxial or multi-conductor communications cable protected by mechanical and/or electrical means from physical damage and/or intrusion in such a manner that communications security is maintained between terminals without the necessity for encryption.

Explanatory Note: Cable that is 'armoured' by only a tough outer sheath or that is electro-magnetically screened only is not intended to be covered by this sub-item. Equipment associated with cable described in (a) and (b) will be considered separately under item I.L. 1523.

Cable as described in (a) and (b) above provided that, (a) submarine cable is used in links with Western Countries *(b) quantities of cable needed are normal for civilian applications for the techniques concerned.*

1527. All cypher machines, cryptographic and/or coding devices and equipment, and associated equipment, usable on any transmission system (telegraphy, telephony, facsimile, video, data), that is designed to ensure the secrecy of communications and thus prevent clear reception by other than the intended receiver.

Technical Note: This item is intended to refer to all the related equipment for cypher machines and cryptographic and/or coding devices, specialised assemblies, sub-assemblies and components, and equipment containing components embargoed by this item. It is not intended to refer to simple coding devices or equipment only ensuring the privacy of communications.

1528. Coaxial cable with the outer conductor electroplated directly on spirally-grooved cable dielectric.

1529. Electronic measuring, calibrating, counting, testing and time interval equipment, whether or not incorporating frequency standards, having any of the following characteristics:

(a) consisting of, or containing, frequency measuring equipment or frequency standards designed for:
  (i) other than ground laboratory use, with an accuracy better than 1 part in 10; or
  (ii) ground laboratory use, with a stability over 24 hours of 1 part in 10^9 or better;

(b) Instruments, as follows (for radio spectrum analysers see Item 1533):
  (1) Designed for use at frequencies exceeding 12.5 GigaHertz;
  (2) Designed for use at frequencies exceeding 3 GigaHertz, excluding: Adapters, airlines, attenuators, couplers, dummy loads, filters, line stretchers, phase shifters, mechanically or electro-mechanically tuned signal generators, slotted lines and sections, terminations, thermistor mounts, bolometer mounts, tuners, tunable shorts, resonant cavity frequency meters, noise sources, power meters and accessories, non-programmable sweep generators, crystal detectors and crystal detector mounts; if they are not designed for use at frequencies exceeding 12.5 GigaHertz.

(3) Designed for use at frequencies exceeding 1 GigaHertz, as follows:
  (i) Programmable signal and sweep generators (for synthesisers, see sub-item (c));
  (ii) Phase meters;
  (iii) Impedance meters;
  (iv) Instruments for automatically measuring equivalent circuit parameters over a range of frequencies;

(4) Employing time compression of the input signal or fast Fourier transform (FFT) techniques.

(c) Frequency synthesisers having any of the following characteristics:
  (1) Maximum frequency in excess of 500 MegaHertz;
  (2) Incremental frequency resolution better than 1 KiloHertz;
  (3) Electrically programmable;
  (4) Having a level of spurious components in output better than −70 decibels non-harmonic and −50 decibels harmonic component measured relative to fundamental frequency;

  Equipment with a resolution not closer than 10 Hertz for use in specific civil communications stations known to the exporting country.

(d) Counting equipment capable of resolving at normal input levels successive input signals with less than 5 nanoseconds time difference;

Explanatory Note: The resolution of counting equipment is that of the most rapid element of the chain (prescaler, frequency divider, etc.).

(e) Time interval measuring equipment containing counting equipment or capable of measuring time intervals as specified in sub-item (d) above:

(f) Testing equipment rated to maintain specified operating data when operating over a range of ambient temperatures from below −25°C to above +55°C.

(See also Items M.L. 18, I.L. 1355 and sub-item I.L. 1485 (i)).

(g) Digital voltage measuring apparatus—with or without electrical outputs—irrespective of the physical units in which calibrated, with a reading speed (from zero to the measured value) faster than 10 accesses per second and having any of the following characteristics:
  (1) Digital resolution at all points on the scale greater than one part in 200,000;
  (2) Accuracy better than 1 part in 50,000 (0.002 per cent) of reading over an ambient temperature range of ±5°C or more; or a stability better than 10^{-6} of reading over a period of 24 hours or more.
  (3) Capable of more than 500 independent measurements per second.

Explanatory Notes:

1. Reading speed is assumed not to include changes in range or polarity.
2. Sub-item (g) above is not intended to cover
  (i) Visual quantisation apparatus capable of providing an average value, displayed or not, of the results of the measurement;
  (ii) Multichannel analysers of all types used in nuclear experimentation.
  For transmitting and receiving equipment see Item I.L. 1517 and 1533, and for analogue to digital converters, **excluding** digital voltage measuring instrument, see Item I.L. 1568.

(See also Items M.L. 18, I.L. 1355 and sub-Item I.L. 1485 (i))

1533. Radio spectrum analysers (being apparatus capable of indicating the single-frequency components of multi-frequency oscillation), as follows:

(a) Designed to operate at frequencies over 1,000 MegaHertz;

(b) Having a display bandwidth in excess of 12 MegaHertz;

(c) Specialised components, accessories and parts therefor.

1537. Electromagnetic waveguides and components therefor, as follows:

(a) Rigid and flexible waveguides and components designed for use at frequencies in excess of 12.5 GigaHertz;

(b) Waveguides having a bandwidth ratio greater than 1.5 : 1;

(c) Waveguides components, as follows:
  (1) Directional couplers having a bandwidth ratio greater than 1.5 : 1 and directivity over the band of 15 decibels or more;
  (2) Rotary joints capable of transmitting more than one isolated channel or having a bandwidth greater than 5 per cent of the centre mean frequency;
  (3) Magnetic, including gyro-magnetic, waveguide components;

(d) Pressured waveguides and specialised components therefor;

(e) TEM mode devices, using magnetic, including gyro-magnetic properties;

(f) TR and anti-TR tubes and components therefor, except those designed for use in waveguides operating at a peak power not exceeding 160 kilowatts and at a frequency of 10.5 GigaHertz or less which are in normal civil use for ground or marine radar.

Equipment described in sub-item (f) which is in normal civil use for ground or marine radar.

1541. Cathode ray tubes having any of the following characteristics:

(a) A resolving power of 800 lines or more per inch (32 lines per millimetre), using the shrinking raster method of measurement;

(b) Writing speeds of more than 15,000 kilometres per second;

(c) Alpha-numeric and similar display tubes in which a symbol-mask within the tube can be scanned to display any of the symbols on any part of the phosphor.

1542. Cold cathode tubes and switches, as follows:

(a) Triggered spark-gaps, having an anode delay times of 15 microseconds or less and rated for a peak current of 3,000 amps or more; specially designed parts therefor; equipment incorporating such devices;

(b) Cold cathode tubes, whether gas-filled or not, operating in a manner similar to a spark-gap, containing three or more electrodes and having all the following characteristics:
  (1) Rated for an anode peak voltage of 2,500 volts or more;
  (2) Rated for peak currents of 100 amps or more;
  (3) An anode delay time of 10 microseconds or less;
  (4) An envelope diameter of less than 25.4 mm. (1 in.).

Explanatory Notes: Triggered spark-gaps are tubes with a structure consisting of two opposed anodes with shapes resembling flattened hemispheres and with one or more triggering probes placed approximately in the centre of one anode. The structure is sealed and contains a mixture of gases, principally nitrogen under less than atmospheric pressure.

Sub-item (b) includes gas krytron tubes, vacuum krytron tubes and similar tubes.

1544. Semi-conductor diodes and thyristors, having a bulk material other than selenium or copper oxide, as follows:

(a) Mixer and detector diodes designed or rated for use at input or output frequencies above 1 GigaHertz, **except** point contact diodes, designed or rated for use at input frequencies not exceeding 12.5 GigaHertz;

(b) Oscillator diodes and bulk effect devices (used for the direct conversion of DC to RF power) designed or rated for use at output frequencies greater than 300 MegaHertz;

(c) Voltage variable capacitor diodes designed or rated for use at input or output frequencies greater than 300 MegaHertz, **except** those having all of the following characteristics:

(i) a rated power dissipation of less than 0.5 watts at 25°C (77°F);
(ii) A series inductance higher than 1 nanoHenry;
(iii) A typical figure of merit Q of less than 800 measured at a reverse voltage of 4 volts and a frequency of 50 MegaHertz;

(d) Fast recovery diodes, as follows:

(1) Having a rated maximum reverse recovery time of less than 2 nanoseconds;
(2) Having both a rated forward rectified current over 1 ampere and a rated maximum reverse recovery time of less than 30 nanoseconds;

Explanatory Notes: 1. When average reverse recovery time is quoted instead of maximum reverse recovery time, the maximum may be regarded as two times the average.

2. When reverse recovery time is not quoted, diodes rated for a stored charge of less than 25 pico-coulombs shall be regarded as embargoed by sub-item (d) above.

(e) Tunnel diodes;

(f) Thyristors, as follows:

(1) Designed for use in pulse modulators having a rated turn-on time of less than 1 microsecond where the rated peak current exceeds 100 amperes;
(2) Having a rated turn-off time of less than 3 microseconds;
(3) Having a rated turn-off time of from 3 microseconds to less than 6 microseconds and a figure of merit greater than 1;
(4) Having a rated turn-off time of from 6 to 10 microseconds and a figure of merit greater than 10.

Explanatory Note: The figure of merit is here defined as the product of the repetitive peak 'off' state voltage (V DRM) in kilovolts and the repetitive peak 'on' state current (I TRM) in amperes as shown on the thyristor data sheets.

This item does not cover non-coherent visible spectrum light emitting diodes used as indicator elements or in alphanumeric displays.

(For photodiodes, see Item IL 1548.)

1545. Transistors and specialised parts therefor, **except** photo-transistors (see Item I.L. 1548), as follows:

(a) Of any type using a bulk semi-conductor material other than germanium or silicon;

(b) Using germanium as the bulk semi-conductor material and having any of the following characteristics:

(1) An average f_τ greater than 1,000 MegaHertz;
(2) A product of the average f_τ in MegaHertz and the maximum collector dissipation in watts exceeding 1,000.

(c) Using silicon as the bulk semi-conductor material and having any of the following characteristics:

(1) An average f_τ greater than 700 MegaHertz;
(2) A product of the average f_τ in MegaHertz and the maximum collector dissipation in watts exceeding 350.
(3) Majority carrier devices, including but not limited to field effect transistors and metal oxide semi-conductor transistors.

Explanatory Notes: This item includes all devices incorporating a semi-conducting crystal of any material with three or more electrical connections or with only two such connections where four or more active junctions exist within a single block of semi-conductor material, which are used as amplifiers, oscillators, trigger devices, etc., or combinations thereof in electronic circuits.

The maximum collector dissipation is defined as the continuous dissipation measured at an ambient temperature of 25°C under any cooling conditions.

Where the average f_τ is not quoted or known, this value shall be taken as 1.5 times the minimum f_τ.

Where f alpha (the frequency at which the modules of the current gain in the common base connection has decreased to 0.707 of its low frequency value) is quoted instead of f_τ, f_τ may be regarded as 0.8 times f alpha.

Field effect transistors (C3) *for use in civil TV AM/FM receivers or audio equipments.*

1548. Photo cells, as follows:

(a) Photoelectric cells, photo-conductive cells (including phototransistors and similar cells) with a peak sensitivity at a wavelength longer than 12,000 Angström units or shorter than 3,000 Angström units;

(b) Photo-transistors (photo-conductive cells including photo-diodes) with a response time constant of 0.5 microsecond or less measured at the operating temperature of the cell for which the time constant reaches a minimum.

Explanatory Notes: The time constant is defined as the time taken from the application of a light stimulus for the current increment to reach a value of 1-1/e times the final value (ie 63 per cent of the final value).

This item is not intended to include germanium photo devices with a peak sensitivity at a wavelength shorter than 17,500 Angström units.

1549. Photomultiplier tubes as follows:

(a) For which the maximum sensitivity occurs at wavelengths longer than 7,500 Angström units or shorter than 3,000 Angström units; or

(b) having an anode pulse rise time of less than 1 nanosecond.

Non-ruggedised tubes described in sub-item (a) *above required as replacement parts for specific civil equipment not exceeding the capability of that which could be exported under this List, provided that these parts do not upgrade the initial performance of such equipment.*

1550. Thermal detecting cells, ie bolometers and thermocoupler detectors, radiant energy types only, with a response time constant of less than 10 milliseconds measured at the operating temperature of the cell for which the time constant reaches a minimum.

1553. Flash-discharge type X-ray systems, including tubes, except those systems or tubes having all of the following specifications:

(a) peak power of 500 MegaWatts or less;
(b) output voltage of 500 Kilovolts or less;
(c) pulse width of 0.2 microsecond or more.

1555. Electron tubes and specialised components and parts therefor (**except** commercial standard television camera tubes not having fibre optic faceplates and commercial standard X-ray amplifier tubes), as follows:

(a) Image intensifiers, image converters and camera tubes incorporating intensifiers and converters or coupled with such tubes;

(b) Electronic storage tubes, including memory transformers of radar pictures;

Non-ruggedised direct viewing storage tubes described in sub-item (*b*), *having a diameter or diagonal not exceeding* 280 *mm., for civil radar applications and for civil uses in oscilloscopes.*

(c) Camera tubes with return beam read-out (i.e. camera tubes in which the electron beam is returned to an internal dynode structure within the tube), including return beam vidicons and image isocons, but excluding conventional non-ruggedised image orthicons;

Conventional non-ruggedised isocons described in sub-item (*c*) *above for use in commercial entertainment-type television broadcasting and in commercial standard medical X-ray applications.*

(d) Camera tubes without return beam read-out (including but not limited to SEC vidicons) for which, with a faceplate illuminance of 10^{-4} lumens/ft² (foot-candles) or irradiance of 5×10^{-5} Watts/m², the product of (i) the relative amplitude response (in percentage, ie if 40 per cent use 40.0) at 400 lines/picture height and (ii) the output signal current (in nanoamperes) exceeds 200;

Explanatory Note: For this measurement the source of illumination should be a CIE (International Commission on Illumination) reference 'A, 2,854°K. The test target should have a contrast of 80 per cent or more. The picture aspect ratio should be 3:4.

(e) Camera tubes with fibre optic faceplates and/or electron image amplification by internal microchannel plates described in Item 1556;

Camera tubes having fibre optic faceplates but not otherwise described in this item, provided that the tubes will be used for civil television or medical applications.

(f) Ruggedised vidicon-type tubes, including secondary electron conduction and silicon target vidicon-type tubes, **except** tubes not capable of withstanding acceleration greater than $2\frac{1}{2}$ g at any frequency within the vibration frequency range of 5 Hertz to 2,000 Hertz, and covered by sub-item (d) above.

Explanatory Note: For the purposes of this item 'commercial standard television camera tubes' are defined as non-ruggedised tubes having performance characteristics consistent with normal commercial use and which have been in regular commercial use in identified applications for a minimum of one year.

Electron tubes or specialised components covered by this item that are required as spares or for the servicing of identified equipment containing such items that has previously been exported.

1556. Optical elements and elements for optical tubes, as follows:

(a) Non-flexible fused fibre optic plates or bundles, having all of the following characteristics:

(1) A fibre pitch (centre-to-centre spacing) of less than 15 microns;
(2) A light-absorbing medium surrounding each fibre, or interstitially placed between fibres;
(3) A diameter greater than 13 mm. ($\frac{1}{2}$ in.);

(b) Microchannel plates for electron image amplification having both of the following characteristics:

(1) 15,000 or more hollow tubes per plate; and
(2) Hole pitch (centre-to-centre spacing) of less than 50 microns.

1557. Gas discharge voltage regulator tubes designed to withstand an acceleration of short duration (shock) greater than 1,000 g or to operate in ambient temperatures exceeding 200°C (392°F).

For grid control hot-cathode gas-filled tubes (thyratrons), see Item I.L. 1559; for cold-cathode types, see Item I.L. 1542 (b.)

1558. Electronic vacuum tubes (valves) and specialised parts, as follows:

(a) Tubes in which space charge control is utilised as a functional parameter, including but not limited to triodes and tetrodes, as follows:

(1) Tubes rated for continuous wave operation having either of the following characteristics:

(i) about 4,000 MegaHertz at maximum rated anode dissipation; or

(ii) over the frequency range 300 MegaHertz to 4,000 MegaHertz and for which, under any condition of cooling, the product of the maximum rated anode dissipation (expressed in watts) and the square of the maximum frequency (expressed in MegaHertz) at the maximum rated anode dissipation is greater than 10^8, or where applied to external anode tubes rated only without a radiator and rated only for free air circulation, the product is greater than 5×10^6;

Tubes specially designed for television transmission operating in the frequency range of 470 *MegaHertz to* 960 *MegaHertz and rated for operation without a grid current, the product of the rated anode dissipation and the square of the maximum frequency may reach* 4×10^8. *For tubes intended for other applications and rated for operation without a grid current, the product of the rated anode dissipation and the square of the maximum frequency may reach* 1.5×10^8.

(2) Tubes rated only for pulse operation having either of the following characteristics:

(i) above 1,000 MegaHertz at the peak pulse output power; or

(ii) between 300 MegaHertz and 1,000 MegaHertz and for which, under any condition of cooling, the product of the peak pulse output power (expressed in watts) and the square of the maximum frequency (expressed in MegaHertz) is greater than 4.5×10^{10};

(b) Tubes in which the velocity of the electrons is utilised as one of the functional parameters, including but not limited to klystrons, travelling wave tubes and magnetrons, **except**:

(i) Low power oscillator klystrons designed to operate at frequencies below 11.5 GigaHertz with a maximum rated output power of less than 1.4 watt;

(ii) Fixed frequency and tunable pulsed magnetrons which are in normal civil use in equipment which may be exported under the terms of this List as follows:

(1) designed to operate at frequencies below 3.5 GigaHertz with a maximum rated output power of 1.2 Megawatts or less;

(2) designed to operate at frequencies between 3.5 GigaHertz and 10.5 GigaHertz with a maximum rated output power of 300 Kilowatts or less;

(iii) Fixed frequency continuous wave magnetrons designed for medical use or for industrial heating or cooking purposes operating at a frequency of 2.45 GigaHertz $\pm$0.05 GigaHertz with a maximum rated output power not exceeding 5 kilowatts or at a frequency lower than 1 GigaHertz with a maximum rated output power not exceeding 25 KiloWatts;

Pulse amplifier klystrons described in sub-item (*b*) *above designed to operate at frequencies below* 3.5 *GigaHertz with a maximum rated peak output power of* 1.6 *Megawatts or less.*

(c) Indirectly heated valves of a kind that can be passed through a circular hole of 7.2 mm. in diameter;

(d) valves designed to withstand acceleration of short duration (shock) greater than 1,000 g;

(e) Valves designed for operation in ambient temperatures exceeding 100°C;

(f) Vacuum tubes specially designed for use as pulse modulators for radar or for similar applications, having a peak anode voltage rating of 100 kilovolts or more; or rated for a peak pulse power of 2.4 MegaWatts or more.

Travelling wave tubes and mounts designed to operate at frequencies below 12.5 *GigaHertz for use as the output tube in civil communications, subject to the tube having the following characteristics:*

(*i*) *a saturated output power not exceeding* 40 *watts at or below* 8.5 *GigaHertz;*

(*ii*) *a saturated output power not exceeding* 20 *watts between* 8.5 *GigaHertz and* 12.5 *GigaHertz.*

Tubes covered by sub-items (*a*) *and* (*b*) *above, specially designed for television purposes and which are to be used in television transmitters, the precise location of which is known, for civil telecasting according to CCIR or OIR standards.*

Tubes covered by sub-items (*a*) *and* (*b*) *required as replacement parts for specific civilian equipment (for example pulse amplifier klystrons and fixed frequency and tuneable pulsed magnetrons covered by sub-item* (*b*) *and needed for civil radar) not exceeding the capability of that which could be exported in the context of other List items, provided that these parts do not upgrade the initial performance of that equipment.*

1559. Hydrogen thyratrons rated for a peak pulse power output of 12.5 MegaWatts or more.

Explanatory Note: A thyratron is any hot cathode gas-filled tube containing 3 or more electrodes in which anode current flow is initiated by a control electrode.

Hydrogen thyratrons required as replacement parts in specific civil radar equipment previously exported, provided that they do not upgrade the initial performance of that equipment.

1560. Components and parts used as inductive and capacitive elements in electronic circuits, designed for and/or capable of reliable performance in relation to their electrical and mechanical characteristics and maintaining their design service lifetime while operating:

(a) over the whole range of ambient temperatures from below −45°C to above +100°C; or

(b) at ambient temperatures of 200°C or higher.

Explanatory Note: Included in this definition are such items as capacitors, transformers, chokes, relays, etc.

1561. Materials specially designed and manufactured for use as absorbers of electromagnetic waves having frequencies greater than 2×10^8 cycles per second, and less than 3×10^{12} cycles per second.

1562. Tantalum and niobium electrolytic capacitors designed to operate permanently at temperatures exceeding 85°C (185°F) without derating, **except** sintered electrolytic types having a casing made of epoxy resin or which are sealed or coated with epoxy resin.

Tantalum capacitors covered by this item that are rated for operation at less than 125°C (257°F) *when the licensing authority is satisfied that they are to be used in civil mobile communications equipment or in other identified civil equipment applications.*

1564. Electronic components, as follows:

(a) Assemblies and sub-assemblies constituting one or more functional circuits with a component density greater than 75 parts per cubic inch (4.575 parts per cubic centimetre);

(b) Modular insulator panels (including wafers) mounting single or multiple electronic elements and specialised parts therefor.

Explanatory Note: Circuit boards and panels which do not contain components described in this list and which do not come within the scope of sub-item (a) above are not covered by sub-item (b) unless they are constructed of insulating materials other than paper base phenolics, glass cloth melamine, glass cloth epoxy resin or of insulating materials with an operating temperature range not exceeding that of the above-mentioned materials.

(c) integrated circuits, i.e. assemblies and sub-assemblies containing one or more functional circuits in which there are both components and inter-connections formed by the diffusion or deposition of materials into or on a common substrate.

Devices described in sub-items (*a*), (*b*), (*c*), *provided that the devices have been designed specifically for identifiable civil applications and, by nature of design or performance, are substantially restricted to the particular application for which they have been designed.*

Group G. Scientific Instruments and Apparatus, Servomechanisms and Photographic Equipment

1565. Electronic computers and related equipment as follows:

(a) Analogue computers with one or more of the following characteristics:

(1) Rated errors less than

(i) Summers, inverters and integrators:

(a) Static: 0.02 per cent

(b) Total at 1 KiloHertz 0.15 per cent

(ii) Multipliers:

(a) Static: 0.1 per cent

(b) Total at 1 KiloHertz 0.25 per cent

(iii) Fixed function generators: Log X and sine/cosine: Static: 0.1 per cent.

Explanatory Note: The percentage for sub-item (a) (1) (i) (a) applies to the actual output voltage; all other percentages apply to full scale, that is from maximum negative to maximum positive reference voltages.

Total errors at 1 KiloHertz are to be measured with those resistors incorporated in the inverter, summer or integrator which provide the least error.

Total error measurements include all errors of the unit resulting from, for example, tolerances of resistors and capacitors, tolerances of input and output impedances of amplifiers, the effect of loading, the effects of phase shift, and the generating of functions.

(2) More than 75 operational amplifiers;

(3) More than four integrator time scales, switchable during one programme;

(b) Analogue computers designed or modified for use in airborne vehicles, missiles or space vehicles and rated for continuous operation at temperatures from below −45°C to above +55°C; and equipment or systems incorporating such computers;

(c) Other analogue computers capable of accepting, processing and putting out data in the form of one or more continuous variables and capable of incorporating a total of at least 20 summers, integrators, multipliers or function generators with facilities for readily varying the inter-connection of these components:

(d) Digital computers with one or more of the following characteristics:
- (1) The CPU implements floating point operations by hardware;
- (2) The sum of either the 'I/O bus rate' or the 'total effective bit transfer rate', whichever is less, and the 'CPU bus rate' exceeds 10.8 million bits per second;
- (3) The internal memory has a total connected capacity (excluding parity, word marker and flag bits) of more than 0.8 million bits;
- (4) The computer is equipped with peripheral memory devices as follows:
  - (i) More than 12;
  - (ii) The 'total effective bit transfer rate' (excluding data channels not equipped with peripheral memory units) exceeds 0.7 million bits per second;
  - (iii) Any magnetic tape transport with:
    - (a) More than 800 bits per inch per track;
    - (b) More than 75 inches per second tape speed;
    - (c) More than nine tracks per $\frac{1}{2}$ in. tape width; or
    - (d) More than $\frac{1}{2}$ in. tape width.
  - (iv) For peripheral memory devices other than magnetic tape transports:
    - (a) Total connected 'net capacity' exceeds 3 million bits;
    - (b) 'Total number of accesses' exceeds 120 per second.
- (5) Computers with cathode ray tube displays as follows:
  - (i) Used to display alpha-numeric and similar data or information, excluding those displays for which circuitry and character-generation devices external to the tube limit displays to alpha-numeric characters in fixed formats or to graphs composed only of the same basic elements as used for alpha-numeric character composition (this exclusion is limited to graphic displays for which the sequence of symbols and basic elements of symbols are fixed by the format and character generators in the unit and cannot be generated arbitrarily by the computer).
  - (ii) With light gun or other graphic input devices, excluding those which are parts of displays for which circuitry and character-generation devices external to the tube limit displays to alpha-numeric characters in fixed format or to graphs composed only of the same basic elements as used for alpha-numeric character composition.
- (6) The computer is equipped with 'terminal devices' located remote from the 'computer operating area' as follows:
  - (i) the 'total effective bit transfer rate' (excluding parity, word marker and flag bits) as limited by any communication channel exceeds 1,400 bits per second;
  - (ii) the 'effective bit transfer rate' of any 'terminal device' exceeds 1,200 bits per second;
- (7) The computer has interface equipment for which:
  - (i) the 'effective bit transfer rate' of any interfaced 'communication channel' exceeds 200 bits per second; or
  - (ii) any interfaced 'communication channel' is not dedicated full time to the given application.

(e) Digital computers and digital differential analysers (incremental computers) designed or modified for use in airborne vehicles, missiles or space vehicles and rated for continuous operation at temperatures from below −45°C to above +55°C ; and equipment or systems incorporating such computers or analysers;

(f) Other digital computers operated by one or more common control units and capable of all of the following:
- (1) Accepting storing, processing and producing an output in numerical or alphabetical form;
- (2) Storing more than 512 numerical and/or alphabetical characters or having an internal memory of more than 2,048 bits;
- (3) Performing a stored sequence of operations that are modifiable by means other than a physical change in circuitry; and
- (4) Selecting a sequence from a plurality of stored operations based upon data or an internally computed result;

(g) Computers capable of operating in both analogue and digital modes and related equipment as follows:
- (1) Equipment whose analogue portion meets the conditions of sub-item (c) and whose digital portion meets the conditions of sub-item (f) and which also provides facilities for processing in the digital section numeric data from the analogue section and/or vice versa;
- (2) Equipment for inter-connecting the analogue and digital portions of computers as described in sub-item (g) (1);
- (3) Digital or analogue computers containing inter-connecting equipment as described in sub-item (g) (2);

(h) Specialised parts, components, peripherals, sub-assemblies, accessories and spare parts for the above, including those which are also described in Items I.L. 1572 and I.L. 1588.

Analogue computers covered by sub-items (a) (1) (i) (a), (a) (1) (ii) (a), (a) (2) and (c), digital computers covered by sub-items (d) (1)-(4) and (f) and equipment for computers covered by sub-item (h), subject to certain conditions, including:

(a) that the equipment is primarily used in non-strategic applications;

(b) that the equipment will be used primarily for the specific non-strategic applications for which the export would be approved and that the number, type and characteristics of such equipment are normal for the approved use;

(c) that if they are analogue computers covered by sub-items (a) (1) (i) (a), (a) (1) (ii) (a) or (a) (2), the static rated error for summers, inverters and integrators are not less than 0.01 per cent and for multipliers are not less than 0.025 per cent and there are not more than 350 operational amplifiers;

(d) that if they are digital computers covered by sub-item (d) (1)-(4), all of the following additional conditions are met:
- *(1) The sum of either the 'I/O bus rate' or the 'total effective bit transfer rate', whichever is less, and the 'CPU bus rate' does not exceed 40 million bits per second;*
- *(2) The 'processing data rate' for CPUs which implement floating point operations by hardware does not exceed 8 million bits per second;*
- *(3) The internal memory total connected capacity (excluding parity, word marker and flag bits) does not exceed 2.36 million bits;*
- *(4) For peripheral memory devices with which the computer is equipped:*
  - *(i) No more than 12 magnetic tape transports;*
  - *(ii) The 'total effective bit transfer rate' excluding data channels not equipped with peripheral memory units does not exceed 8 million bits per second;*
  - *(iii) The 'effective bit transfer rate' of any peripheral memory or data channel does not exceed 1.5 million bits per second;*
  - *(iv) For peripheral memory devices other than magnetic tape transports;*
    - *(a) Total connected 'net capacity' does not exceed 305 million bits;*
    - *(b) For each independent device, 'net capacity' (in millions of bits) does not exceed 'average access time' (in seconds) raised to the 3/2 power and then multiplied by 8,000; and*
    - *(c) 'Total number of accesses' does not exceed 150 per second.*
  - *(v) For 'terminal devices' located remote from the 'computer operating area;*
    - *(a) the 'total effective bit transfer rate' (excluding parity, word marker and flag bits) as limited by any communication channel does not exceed 4,800 bits per second;*
    - *(b) the 'effective bit transfer rate' of any 'terminal device' does not exceed 2,400 bits per second;*
  - *(iv) For computers with interface equipment:*
    - *(a) the 'effective bit transfer rate' of any interfaced communication channel' does not exceed 1,200 bits per second; and*
    - *(b) all interfaced 'communication channels' are dedicated full time to the given application.*

Interpretative definitions of the terminology used such as 'CPU bus rate', 'average seek time.' etc. will be provided, if required, on application to the Export Licensing Branch.

1568. Equipment, as follows:

(a) All classes of devices, regardless of other characteristics, identified in sub-items (b), (c), (d), (e), (f), (g), (j) and (h) below, which are designed to operate below −55°C or above +125°C;

(b) Synchros and resolvers (and special instruments rated to have the same characteristics as synchros and resolvers in (1) and (2) below, such as Microsyns, Synchro-Tels and Inductosyns) possessing any of the following characteristics;
- (1) A rated electric error of 7 minutes of arc or less or of 0.2 per cent or less of maximum output voltage;
- (2) A rated dynamic accuracy for receiver types of 1 degree or less, except that for units of size 30 (3 in. in diameter) or larger a rated dynamic accuracy of less than 1 degree;
- (3) Multi-speed from single shaft types;
- (4) Employing solid state Hall effect;
- (5) Designed for gimbal mounting

(c) Amplifiers, electronic or magnetic, specially designed for use with resolvers, as follows:
- (1) Isolation types having a variation of gain constant (linearity of gain) of 0.2 per cent or better;
- (2) Summing types having a variation of gain constant (linearity of gain) or an accuracy of summation of 0.2 per cent or better;
- (3) Employing solid state Hall effect;

(d) Induction potentiometers (including function generators and linear synchros), linear and non-linear, possessing any of the following characteristics:
- (1) A rated conformity of 0.25 per cent or less, or of 13 minutes of arc or less;
- (2) Employing solid state Hall effect;
- (3) Designed for gimbal mounting;

(e) Induction rate (tachometer) generators, synchronous and asynchronous as follows:
- (1) Employing solid state Hall effect;
- (2) With a housing diameter of 50 mm. (2 in.) and smaller and a length (without shaft-ends) of 100 mm. (4 in.) and smaller or with a diameter-to-length ratio greater than 2:1. having one or more of the following characteristics:
  - (i) With a rated linearity of 0.1 per cent or less;
  - (ii) All temperature-compensated or temperature-corrected types:

(f) Servo motors (gear-head or plain) as follows:
  (1) Designed to operate from power sources of more than 300 Hertz **except** those designed to operate from power sources of over 300 Hertz up to and not exceeding 400 Hertz with a temperature range of from −55°C to +125°C;
  (2) Designed to have a torque-to-inertia ratio of 50,000 radians per second or greater;
  (3) Incorporating special features to secure internal damping;
  (4) Employing solid state Hall effect.

(g) Potentiometers (and special instruments rated to have the same characteristics as potentiometers in (i) and (ii) below, such as Vernistats), as follows:
  (1) Linear potentiometers having a constant resolution and a rated linearity of 0.1 per cent or less;
  (2) Non-linear potentiometers having a variable resolution and a rated conformity of:
    (i) 1 per cent or less when the resolution is inferior to that obtained with a linear potentiometer of the same type and of the same track length;
    (ii) 0.5 per cent or less when the resolution is better than or equal to that obtained with a linear potentiometer of the same type and of the same track length;
  (3) Designed for gimbal mounting;

Explanatory Note: This sub-item does not include potentiometers using only switched elements.

(h) Direct current and alternating current torquers, ie torque motors specially designed for gyros and stabilised platforms;

(i) Electro-optical devices designed to monitor relative rotation of remote surfaces;

(j) Synchronous motors, as follows:
  (1) Of size 20 (50.8 mm. (2 in.) in diameter) and smaller and having synchronous speeds in excess of 3,600 revolutions per minute.
  (2) Designed to operate from power sources of more than 400 cycles per second;

(k) Analogue-to-digital and digital-to-analogue converters other than digital voltmeters (see Item 1529), as follows:
  (1) Electrical-input types possessing:
    (i) A peak conversion rate capability in excess of 50,000 complete conversions per second;
    (ii) An accuracy in excess of 1 part in more than 10,000 of full scale; or
    (iii) A figure of merit of 10^7 or more (derived from the number of complete conversions per second divided by accuracy);
  (2) Solid state synchro-to-digital and digital-to-synchro resolvers;
  (3) Mechanical input types (including but not limited to shaft position encoders and linear displacement encoders but excluding complex servo-follower systems) as follows:
    (i) Rotary types having an accuracy or maximum incremental accuracy better than ± 1 part in 10,000 of full scale;
    (ii) Linear displacement types having an accuracy of better than ± 5 microns;
  (4) Employing solid state Hall effect;

(l) Semi-conductor Hall field probes, as follows;
  (1) Made of indium-arsenide-phosphide (In As P);
  (2) Coated with ceramic or ferritic materials (eg special field probes such an tangential field probes, multipliers, modulators, recorder probes, etc.);
  (3) With an open circuit sensitivity greater than
  0.12 Volt

  Ampere × Kilogauss

Explanatory Note: The slope of a straight line that passes through the point of origin and through the point u_{20}: 1_1 at B=Bn, in the characteristic is defined as the **open circuit sensitivity** (where u_{20}=Hall voltage, open circuit; i,=Control current; Bn = Rated value of applied magnetic control field).

(m) Specially designed parts, components, sub-assemblies and test equipment (including adapters, couplers, etc.) for the above.

1570. Thermoelectric materials and devices as follows:

(a) Thermoelectric materials with a maximum product of the figure of merit (Z) and the temperature (T in °K) in excess of 0.75;
(b) Junctions and combinations of junctions using any of the materials in (a) above;
(c) Heat absorbing and/or electrical power generating devices containing any of the junctions in (b) above;
(d) Other power generating devices which generate in excess of 10 watts per pound or of 500 watt per cubic foot of the devices' basic thermo-electric components;
(e) Specialised parts, components and sub-assemblies, for the above devices (See also sub-item I.L. 1205(c)).

Explanatory Notes: The figure of merit (Z) equals Seebeck coefficient squared divided by the product of electrical resistivity and thermal conductivity.

The weight and cubic measurements in sub-item (d) above are not intended to encompass the complete device but to include only the thermo-electric elements and assembly and the components for pumping calories. Other components, such as heating and/or cooling sources or containers, device frames or stands and control equipment are not to be included in the calculations.

1571. Magnetometers having or capable of having a sensitivity better than ± 1.0 gamma (± 10^{-5} oersteds), and specially designed parts therefor.

Explanatory Notes:

(1) Sensitivity is defined as the visually recognised minimum sinusoidal signal in the frequency range of 0.025 Hertz to 1.5 Hertz when signal-to-noise ratio is higher than 1.
(2) 'Specially designed parts therefor' is intended to include active rotational compensation, as opposed to static compensation methods, and any form of dynamic signal processing or gradient compensation provided as part of, or designed for use with, magnetometers included in this item.

1572. Recording and/or reproducing equipment, as follows (for equipment which may be exported in conjunction with computer shipments see Item I.L. 1565).

(a) Using magnetic techniques, **except** those specifically designed for voice or music;
(b) Using electron beam(s) operating in a vacuum, and/or laser-produced light beams (see also sub-item I.L. 1521 (e)), that produce patterns or images directly on the recording surface, and specialised equipment for image development;
(c) Graphic instruments capable of continuous direct recording of sinusoidal waves at frequencies exceeding 20 KiloHertz.;
(d) Specialised parts, components and recording media for the above.

Explanatory Note: The term 'recording media' in sub-item (d) above is intended to include all types and forms of specialised recording media used in such recording techniques, including but not limited to tapes, drums, discs and matrices, **except** magnetic cards, checks and similar discrete non-rigid magnetic media other than tape.

Equipment described in sub-item (a) above, and specialised parts, components and recording media therefor, for use with the exported equipment, as follows;

(a) magnetic tape recorders specially designed for television recording using a signal registered with the CCIR, and having all of the following characteristics:
  (i) 3 decibel recording bandwidth not exceeding 4 MegaHertz;
  (ii) time base error of not less than 4 microseconds over a 20 millisecond interval;
  (iii) peak-to-peak signal to r.m.s noise ratio not exceeding 45 decidels;
  (iv) differential gain of not less than 5 per cent;
  (v) maximum length of time of a single scan not exceeding 20 milliseconds;
  (vi) not ruggedised;
  (vii) containing no electronically controlled delay lines;

(b) analogue recorders having all of the following characteristics:
  (i) bandwidth capability at maximum design speed not exceeding 100 KiloHertz per track;
  (ii) recording density not exceeding 5,000 magnetic flux sine waves per linear inch per track;
  (iii) not ruggedised;
  (iv) not rated for continuous operation in ambient temperatures from below −20°C to above + 55°C;
  (v) not specifically designed for underwater use;
  (vi) not including recording and/or reproducing heads of the rotary or floating types or designed for use in equipment with characteristics superior to those defined in sub-paragraphs (b) (i) and (ii) above;
  (vii) tape speed not exceeding 60 in. per second;
  (viii) number of recording tracks (excluding audio voice track) not exceeding 16;
  (ix) start-stop time not less than 25 milliseconds.

(c) Systems for use in civil aircraft or helicopters to record flight data for safety and/or maintenance purposes, and having all of the following characteristics:
  (i) in normal civil use for more than one year;
  (ii) not exceeding 100 input channels;
  (iii) sum of the individual channel recording bandwidth not exceeding 500 Hertz.

(d) recording equipment having no apparent relations to embargoed equipment or materials, provided that the capability of the recorder is limited to both:
  (i) the use of ¼ in. wide tape;
  (ii) digital recording techniques in serial form with a packing density not exceeding 800 bits per inch.

Explanatory Note: The recording density in Note 2 (b) (ii) above is, for direct recorders, the recording bandwidth divided by the tape speed; for FM recorders, the carrier frequency plus deviation divided by the tape speed; and in Note 2 (d) (ii) above, for digital recorders, the bits per second per track divided by the tape speed.

Magnetic tape on reels for use with computers, provided that they have all of the following characteristics:

(a) a base of untensilised polyethylene polyterephthalate;
(b) a base of nominal thickness not less than 22 microns (0.87 mil);
(c) a tape width not exceeding 19 mm (¾ in.);
(d) a magnetic coating certified for maximum packing density of 1,600 bits per inch along the length of the tape and 14 recording tracks across the tape;

(e) reels are specially designed for computer use and have a diameter not exceeding 267 mm (10.5 in.) and a tape length not exceeding 1,097.3 m (3,600 ft.).

Incremental recorders and/or reproducers (ie equipment designed for the discontinuous sampling and/or collection of data in an incremental manner) with the characteristics described in (iii) to (vi) of paragraph (b) of this Note and with a maximum tape speed, at the maximum stepping rate of 5.1 cms. (2 in.) per second or less.

Video tape in reasonable quantities for use in civil television recording and reproducing applications:

(1) *Chromium dioxide-coated tape with a width of 12.7 mm (½ in.) or less;*

(2) *Undoped gamma-iron oxide-coated tape with a rated intrinsic coercitivity not exceeding 350 oersteds.*

1576. Centrifugal testing apparatus or equipment possessing any of the following characteristics:

(a) Driven by a motor or motors having a total rated horsepower greater than 400 horsepower;

(b) Capable of carrying a payload of 113.4 Kgs. or more;

(c) Capable of exerting a centrifugal acceleration of 8 or more 'g' on a payload of 90.72 Kgs. or more.

1584. Ion microscopes having a resolving power better than 10 Angström units.

1584. Oscilloscopes and specialised parts therefor, as follows:

(a) Cathode ray oscilloscopes, associated plug-in units and external amplifiers and pre-amplifiers possessing any of the following characteristics:

(1) An amplifier bandwidth greater than 75 MegaHertz (defined as the band of frequencies over which the deflection on the cathode ray tube does not fall below 70.7 per cent of that at maximum point measured with a constant input voltage to the amplifier);

(2) Containing or designed for the use of cathode ray tubes with travelling wave or distributed deflection structure or incorporating other techniques to minimise mismatch of fast phenomena signals to the deflection structure;

(3) Ruggedised to meet a military specification;

(5) Rated for operation over an ambient temperature range of from below − 25°C to above +55°C.

(b) Electronic devices for stroboscopic analysis of a signal (ie sampling devices), whether sub-assemblies or separate units, designed to be used in conjunction with an oscilloscope to permit the analysis of recurring phenomena, and which increase the capabilities of an oscilloscope to permit measurements within the limits of equipment described in sub-item (a) (i) above.

1585. Photographic equipment, as follows:

(a) High speed cinema recording cameras, as follows:

(1) Cameras in which the film is continuously advanced throughout the recording period, and which are capable of recording at rates exceeding 3,000 frames per second for the full framing height of standard 35 mm wide photographic film or proportionately higher rates for lesser frame heights, or proportionately lower rates for greater frame heights;

(2) Cameras in which the film moves intermittently during the recording period, being automatically locked in place for each frame, and which are capable of recording at the following rates:

(i) Exceeding 250 frames per second for 16 mm film;

(ii) Exceeding 130 frames per second for 35 mm film;

(iii) Exceeding 50 frames per second for 70 mm film at full frame heights;

(b) High speed cameras in which the film does not move, and which are capable of recording at rates exceeding 250,000 frames per second for the full framing height of standard 35 mm wide photographic film, or proportionately higher rates for lesser frame heights, or proportionately lower rates for greater frame heights;

(c) Cameras incorporating image converters and specially designed controls, parts and accessories therefor;

(d) Photographic systems specially designed for use in space vehicles;

(e) Streak cameras having writing speeds of 8 millimetres/microsecond and above capable of recording events which are not initiated by the camera mechanism.

Explanatory Note: Streak cameras are cameras designed to record the intensity of a light source as a function of time by moving the image of the source along the film in a single direction.

(f) Cameras having shutter speeds of less than 1 microsecond per operation, and specialised parts and accessories therefor;

(g) High speed film, as follows:

(i) Having an intensity dynamic range of 1,000,000:1 or more; or

(ii) Having a speed of ASA 10,000 (or its equivalent) or better;

(h) High speed plates having an intensity dynamic range of 1,000,000:1 or more.

Equipment described in sub-item (c) above **except:**

(i) multi-frame cameras with variable frame intervals and exposures within a sequence;

(ii) accessories and attachments for covering cameras incorporating image converters into multi-frame cameras capable of being operated in a similar mode to those defined in paragraph (i)

Equipment described in sub-item (f).

1586. Praetersonic radio frequency signal processing devices, as follows:

(a) Surface acoustic wave devices (ie radio frequency signal processing devices employing elastic waves in a variety of piezo-electric substances including but not limited to lithium niobate, lithium tantalate, bismuth germanium oxide, yttrium garnet and quartz), which permit direct processing of signals at carrier frequencies over 156 MegaHertz, including amplifiers, fixed, tapped and dispersive delay lines, pulse compression devices and non-linear devices; and specialised parts thereof;

(b) Bulk (volume) acoustic wave devices (ie radio frequency signal processing devices employing elastic waves in a variety of piezo-electric substances similar to those in (a) above) which permit direct processing of signals at carrier frequencies over 1 GigaHertz, including pulse compression and convolution devices, non-linear devices and fixed delay lines; and specialised parts thereof;

Explanatory Note: Praetersonic is defined as that range of frequencies above 10,000 times the nominal high sonic frequencies; eg above 150 MegaHertz.

Devices covered by sub-item (a) above that are specially designed for use in civil television equipment and which operate at frequencies below 1 GigaHertz.

1587. Quartz crystals and assemblies thereof in any stage of fabrication (ie worked, semi-finished or mounted), as follows:

(a) For use as filter elements, and having any of the following characteristics:

(1) Designed for operation over a temperature range wider than 120°C (216°F);

(2) Crystals or assemblies of crystals which use the trapped energy phenomenon (ie those which have more than one series or parallel resonance on a single quartz element);

(b) For use as oscillator elements and having any of the following characteristics:

(1) Designed for operation over a temperature range wider than 169°C (288°F);

(2) Having a frequency stability of plus or minus 0.005 per cent or better over the rated operating temperature range (whether temperature compensated or not).

(3) Capable, when mounted, of being passed through a circular hole with a diameter of 9.9 mm (0.39 in.);

(4) Mounted in metal holders sealed with thermo-compression welding

Explanatory Note: This item only covers quartz crystals having piezo-electric qualities. It is understood that this definition does not cover optical grade quartz crystals.

Items covered by sub-item (a) which have either of the following characteristics:

(a) Designed for operation as intermediate frequency filters, operating at 10.7 or 21.4 MegaHertz with 3 decibel bandwidths not exceeding 30 KiloHertz; or

(b) Designed for operation as single side-band filters operating at from 1 to 10 MegaHertz with 3 decibel bandwidths not exceeding 4 KiloHertz.

1588. Materials composed of crystals having spinel, orthorhombic, hexagonal or garnet crystal structures; thin film devices; assemblies of the foregoing; and devices containing them, as follows:

(for equipment which may be exported in conjunction with computer shipments, see Item I.L. 1565),

(a) Monocrystals of ferrites and garnets, synthetic only:

(b) Single aperture forms possessing any of the following characteristics:

(1) Switching speed of 0.3 microsecond or faster at the minimum field strength required for switching at 40°C (104°F);

(2) A maximum dimension less than 30 mils (0.76 mm).

(c) Multi-aperture forms with fewer than 10 apertures possessing any of the following characteristics;

(1) Switching speed of 1 microsecond or faster at the minimum field strength required for switching at 40°C; (104°F);

(2) A maximum dimension less than 100 mils (2.54 mm);

(d) Multi-aperture forms having 10 or more apertures;

(e) Thin film (including plated wire and plated rods) memory storage or switching devices;

(f) Materials suitable for application in electromagnetic devices making use of the gyro-magnetic resonance phenomenon.

(g) Rod forms possessing any of the following characteristics:

(1) Switching speed of 0.3 microsecond or faster at the minimum field strength required for switching at 40°C (104°F);

(2) A minimum dimension less than 10 mils (0.254 mm).

Single aperture forms described in sub-item (b) above, provided that they have a switching speed of slower than 0.3 microsecond and a maximum dimension of 18 mils (0.46 mm) or more.

1595. Gravity meters (gravimeters) and specialised parts therefor, designed or modified for airborne or marine use.

Group H. Metals, Minerals and their Manufactures

In this Group:

Raw materials cover all materials from which the metal can be usefully extracted, ie ores, concentrates, matte, regulus, residues and dross (ashes); and

Unless provision to the contrary is made in particular items of the definition, the words metal and alloys cover all crude and semi-fabricated forms as follows:

Crude forms:

Anodes, balls, bars (including notched bars and wire bars), billets, blocks, blooms, brickets, cakes, cathodes, crystals, cubes, dice, grains, granules, ingots, lumps, pellets, pigs, powder, rondles, shot, slabs, slugs, sponge, sticks:

Semi-fabricated forms (whether or not coated, plated, drilled or punched):

(i) Wrought or worked material fabricated by rolling, drawing, extruding, forging, impact extruding, pressing, graining, atomising and grinding, ie angles, channels, circles, discs, dust, flakes, foil and leaf forgings, plates, powder, pressings and stampings, ribbons, rings, rods (including bare welding rods, wire rods and rolled wire), sections, shapes, sheets, strip, pipe and tube (including tube rounds, squares and hollows), drawn or extruded wire;
(ii) Cast material produced by casting in sand, die, metal, plaster or other types of moulds, including high pressure castings, sintered forms, and forms made by powder metallurgy.

1601. Anti-friction bearings, as follows:

(a) All ball and cylindrical roller bearings having an inner bore diameter of 10 mm or less and tolerances of ABEC 5, RBEC 5 (or equivalents) of better and either or both of the following characteristics:
  (1) Made of special materials, ie with rings, balls or rollers made from any steel alloy or other material **except** the following:
  Low-carbon steel; SAE-52100 high carbon chromium steel; SAE-4615 nickel molybdenum steel; or equivalents
  (Partial illustrative examples of special materials for this purpose are: high-speed tool steels; stainless steel; monels; beryllium);
  (2) Manufacture for use at normal operating temperatures over 150°C (302°F) either by use of special materials or by heat treatment;
(b) All ball and cylindrical roller bearings (**exclusive** of separable ball bearings and thrust ball bearings) having an inner bore diameter exceeding 10 mm and having tolerances of ABEC 7, RBEC 7 (or equivalents) or better (ABEC 5 in the case of hollow bearings) and either or both of the characteristics in (a) (1) or (a) (2) above:
(c) Bearing parts as follows:
Outer rings, inner rings, retainers, balls, rollers and sub-assemblies usable only for bearings covered by sub-items (a) and (b).

1631. Magnetic metals of all types and of whatever form possessing one or more of the following characteristics:

(a) Grain oriented sheet or strip of a thickness of 0.1 mm (0.004 in.) or less;
(b) Initial permeability 70,000 gauss-oersteds (0.0875 Henry/m) or over;
(c) Remanence 98.5 per cent or over of maximum flux for materials having magnetic permeability;
(d) A composition capable of an energy product;
  (i) exceeding 8 times 10^6 gauss-oersteds (63,700 joules/m^3); or
  (ii) 4.85 times 10^8 gauss-oersteds (38,600 joules/m^3) or greater and having a coercive force of 1,800 oersteds (143,200 amperes/m) or greater.

1635. Iron and steels, alloyed as follows:

(a) Containing 10 per cent or more molybdenum (but more than 5 per cent molybdenum in any alloys containing more than 14 per cent chromium); **except** products obtained by casting and having a carbon content of more than 1.5 per cent;
(b) Nickel bearing stabilised steels, not elsewhere specified, having a total of 38 per cent or more of alloying elements, except such steels containing less than 0.4 per cent titanium or less than 0.8 per cent niobium-tantalum.

Explanatory Note: For the purpose of calculating the 38 per cent cut-off, the maximum of the range specified for each element is to be taken. In the absence of a special maximum for titanium or niobium-tantalum, the figure of 0.4 per cent shall be used to indicate the presence of titanium or 0.8 per cent for niobium-tantalum. The 38 per cent cut-off must not be exceeded to take account of manufacturing or other tolerances. Alloying elements means all constituents other than iron.

(c) Precipitation hardening steels containing 4 per cent or more nickel.

Explanatory Note: Precipitation hardening steels, containing 4 per cent or more nickel, are steel alloys designed for solid separation of critical constituents at sub-critical temperatures. These steels are usually identified by their content of one or more precipitation agents.

1648. Cobalt based alloys (ie containing a higher percentage by weight of cobalt than of any other element), as follows:

(a) Containing 5 per cent or more of tantalum; or
(b) Dispersion strengthened containing more than 1 per cent of oxides of thorium, aluminium, yttrium, zirconium or cerium; or
(c) Containing 0.05 per cent or more of scandium, yttrium, didymium, cerium, lanthanum, neodymium, or praseodymium.

1649. Niobium (columbium), as follows:

(a) Niobium-based alloys containing 60 per cent or more niobium or niobium-tantalum in combination;
(b) Scrap forms of the alloys described in (a) above.

(See also Item I.L. 1760 and sub-item M.L. 20 (b)).

1654. Magnesium base alloys containing 1 per cent or more of didymium, cerium, lanthanum, neodymium, praseodymium, yttrium, or scandium, and scrap forms thereof.

(See also sub-items AE 1 (g) and A.E. 35 (c) (1)).

1658. Molybdenum metal with a purity of more than 99.9 per cent, and alloys containing 97.5 per cent or more of molybdenum, **except** molybdenum metal wire or molybdenum alloy wire, and unalloyed sheets, strips and tapes 50.8 cm (20 in.) or less in width.

1661. Nickel based alloys (ie containing a higher percentage by weight of nickel than of any other element), as follows:

(a) With a combined content of aluminium and titanium greater than 11 per cent;
(b) Dispersion strengthened containing more than 1 per cent of oxides of thorium, aluminium, yttrium, zirconium, cerium, or lanthanum; or
(c) Containing 0.05 per cent or more of scandium, yttrium, didymium, cerium, lanthanum, neodymium, or praseodymium.

1668. Tungsten metal, of 99.9 per cent or more purity, as follows:

(a) Pressed-sintered crude and semi-fabricated forms weighing more than 9 kg (20 lb.), **except** wire and sheet;
(b) Pressed-sintered porous crude and semi-fabricated forms weighing more than 6.8 kg (15 lb.), before infiltration, or more than 9 kg (20 lb.) after infiltration.

Explanatory Notes: Sub-item (b) includes porous forms partially or wholly infiltrated with other metals such as copper, magnesium, silver, tin and/or zinc. Forms shall be regarded as porous if their density prior to infiltration is between 13.5 and 16.4 g/cm^3. The term 'infiltrated tungsten' does not include alloys.

The pressed-sintered porous structure (known as the skeleton) will be of 99.9 per cent or more purity of tungsten before or after the infiltration process.

1670. Tantalum as follows:

(a) Metal and tantalum-based alloys containing 60 per cent or more of tantalum;
(b) Scrap forms of the metal and alloys described in sub-item (a) above.

(See also Items I.L. 1649 and I.L. 1760).

Sheet and strip of 0.127 mm (0.005 *in.*) *or more in thickness and wire, not exceeding* 10 *kg* (22 *lb.*) *in total weight for one unit or coil;*
Gauze and preformed shapes for surgical use.

1671. Titanium as follows:

(a) Crude forms of titanium metal having a Brinell Hardness Number (BHN) of less than 90;
(b) Titanium based alloys containing more than 70 per cent titanium in crude or semi-fabricated forms **except** alloys made of;
  (i) 6 per cent aluminium, 4 per cent vanadium and the balance titanium;
  (ii) 5 per cent aluminium, 2.5 per cent tin, and the balance titanium;
  (iii) up to 0.3 per cent palladium and the balance titanium;
  (iv) 2.5 per cent copper and the balance titanium;
  (v) 4 per cent aluminium, 4 per cent molybdenum, 2 per cent tin, 0.5 per cent silicon and the balance titanium;
  (vi) 8 per cent aluminium, 1 per cent molybdenum, 1 per cent vanadium and the balance, titanium;
  (vii) 4 per cent aluminium, 3 per cent molybdenum, 1 per cent vanadium and the balance titanium;
  (viii) 2 per cent copper, 2 per cent iron, 2 per cent molybdenum and the balance titanium;
  (ix) 5 per cent chromium, 3 per cent aluminium and the balance titanium;
  (x) 5.4 per cent aluminium, 4 per cent copper, 1.3 per cent iron, 1.25 per cent molybdenum and the balance titanium.
(c) Ferro-titanium containing more than 80 per cent titanium and less than 10 per cent iron;
(d) Scrap forms of the metal and alloys covered by (a) (b) and (c) above.

1673. Artificial graphite having an apparent relative density of 1.90 or greater when compared with water at 15.5°C (60°F).

Explanatory Note: Artificial graphite as defined above which has been coated or composited with other elements or compounds to improve its performance at high temperatures or to reduce its permeability to gases is to be regarded as included in the definition. The definition does not apply to artificial graphite which has been impregnated or composited with inorganic materials for the purpose of improving only its electrical conductivity, its mechanical resistance or its mechanical friction properties or to electrical resistors, artificial loads for microwave application, cable waveguide terminations, brush stock special joints for electrodes, boats and crucibles.

Individual shipments of 25 *kg* (55 *lb.*) *or less of pyrolitic graphite* (*ie graphite made by vapour deposition at temperatures exeeding* 1,500°*C* (2,732°*F*) *in crude or semi-fabricated forms, the dimension of any one of which does not exceed* 10 *cm* (4 *in.*) *in any direction.*

Non-pyrolitic graphite, having a relative density of less than 1.95 *which not been coated or composited with other elements or compounds to improve its performance at elevated temperatures or to reduce its permeability to gases.*

Group I. Chemicals, Metalloids and Petroleum products

1701. Lead azide, sodium azide and primary explosives or priming compositions (mixtures) contaning azides and/or azide compounds or complexes.

1702. Hydraulic fluids which are or which contain as the principal ingredients petroleum (mineral) oils and which have all the following characteristics:

(a) a pour point of −34°C (− 30°F) or lower;
(b) a viscosity index of 75 or greater; and
(c) are thermally stable at +371°C (+700°F).

1715. Boron, the following:

(a) Boron element, boron compounds and mixtures in which the boron -10 isotope comprises more than 20 per cent of the total boron content;
(b) Boron element (metal) all forms;
(c) Boron compounds, mixtures, and composites containing 5 per cent or more of boron (**except** pharmaceutical specialities packaged for retail sale), as follows:
  (1) Boron carbide having a boron content of 74 per cent or more by weight and composites thereof in crude or semi-fabricated forms;
  (2) Boron nitride (hexagonal close-packed structure, white form) and composites thereof in crude or semi-fabricated forms; other boron-nitrogen compounds (eg borazanes, borazines, and boropyrazoyls);
  (3) Boron hydrides (eg boranes), **except** sodium boron hydride, potassium boron hydride, monoborane, diborane and triborane;
  (4) Organoboron compounds, including metallo-organoboron compounds;
  (5) Borides with purities above 98.5 per cent and having melting points of 2,000°C (3,632°F) or higher and composites thereof in crude or semi-fabricated forms.

1746. Polymeric substances and manufactures thereof, as follows:

(a) Polyimides;
(b) Polybenzimidazoles;
(c) Polyimidazopyrrolones;
(d) Aromatic polyamides;
(e) Polyparaxylylenes.

Explanatory Note: It is not intended that this item shall include manufactured articles where the value of the polymeric component together with materials mentioned in other items appearing in this schedule is less than 50 per cent of the total value of the article.

(See also Item I.L. 1564.)

1754. Fluoro-carbon compounds and manufactures as follows:

(a) Monomeric and polymeric materials, as follows:
  (1) Polytetrafluoroethylene, coagulated dispersion grades only;
  (2) Polychlorotrifluoroethylene, oily and waxy modifications only;
  (3) Polyvinylidene fluoride;
  (4) Copolymers and terpolymers composed of any combination of the following monomers: tetrafluoroethylene, chlorotrifluoroethylene, vinylidene fluoride, hexafluoropropylene and bromotrifluoroethylene;
  (5) Polybromotrifluoroethylene;
  (6) Dibromotetrafluoroethane;
  (7) Perfluoroalkylamines;
(b) Greases, lubricants and dielectric, damping and flotation fluids made wholly of any of the materials in (a) above;
(c) Electric wire and cable coated with or insulated with any of the materials in (a) above.

Polytetrafluoroethylene coagulate dispersion grades, with a steady state extrusion pressure in excess of 703 *kilogrammes per square centimetre* (10,000 *pounds per square inch*).

1755. Silicone fluids and greases, as follows:

(a) Fluorinated silicone fluids;
(b) Silicone lubricating greases capable of operating at temperatures of 180°C (356°F) or higher and having a drop point (method of test being ASTM and ITP) of 220°C (428°F) or higher.

Silicone lubricating greases not capable of operating at temperatures of 205°C (400°F) *or higher.*

1757. Compounds and metallic materials, as follows:

(a) Monocrystalline silicon wafers, including epitaxially-layered types, having the following characteristics:
  (1) Dislocation densities of 750 per sq. cm or less; and
  (2) Resistivity of less than 70 ohm × cm for N-type; less than 100 ohm × cm for P-type.
(b) Monocrystalline gallium compounds in any form;
(c) Monocrystalline indium compounds in any form.

Explanatory Note: Sub-items (b) and (c) above do not include electronic grades of monocrystalline materials, containing less than 1 per cent of either gallium or indium.

Material conveyed by sub-item (a) above having a dislocation density of 15 *per sq. cm or less and a resistivity of* 15 *ohm* × *cm or less.*

1760. Compounds of tantalum and niobium (columbium), as follows:

(a) Tantalates and niobates having a purity of 98 per cent or more;
(b) Other compounds containing 20 per cent or more of tantalum in which the niobium content with respect to tantalum is less than one part per thousand.

(See also Items I.L. 1649 and I.L. 1670.)

1762. Aluminium hydride.

Individual shipments not exceeding 10 *kg of aluminium hydride.*

1763. Fibrous and filamentary materials which may be used in composite structures or laminates and manufactures thereof, as follows:

(a) Having both of the following characteristics:
  (1) Specific modulus greater than 1.25×10^8;
  (2) Specific tensile strength greater than 3×10^6;
(b) Having both of the following characteristics:
  (1) Specific modulus greater than 1×10^8;
  (2) Melting or sublimation point higher than 1,649°C (3,000°F) in an inert environment: **except** carbonfibres having a specific modulus of less than 2×10^8 and specific tensile strength of less than 1×10^6.
(c) Composite structures and laminates, including metal matrix composite materials, fabricated by using equipment covered by Item 1357, or by metal casting, or by strengthening eutectic alloys in situ by directional solidification, from materials covered by sub-items (a) and (b) above.

Explanatory Notes:

1. The term 'fibrous and filamentary materials' includes:
  (a) continuous monofilament;
  (b) continuous yarns and rovings;
  (c) tapes, woven fabrics and random mats;
  (d) chopped fibres, staple fibres and coherent fibre blankets;
  (e) whiskers, either monocrystalline or polycrystalline, of any length.
2. 'Specific modulus' is Young's modulus in $lb./in.^2$ (measured at a temperature of 23°C ±2°C (73.4°F ±3.6°F) and a relative humidity of 50 per cent ±5 per cent) divided by density in lb./cu. in.
3. 'Specific tensile strength' is ultimate tensile strength in $lb./in.^2$ measured at a temperature of 23°C ±2°C (73.4°F ±3.6°F) and a relative humidity of 50 per cent ±5 per cent divided by density in lb./cu. in.

1770. Any liquid fuel, including petroleum products, having a gross calorific value of not less than 23,400 BTU/lb. (13,000 cal./g) which contains high energy components or compounds.

1781. Synthetic lubricating oils and greases, as follows:

(a) Oils and greases which are or which contain as their principal ingredient, the following:
  (1) Monomeric and polymeric forms of perfluorotriazines, perfluoroaromatic ethers and esters, and perfluoroaliphatic ethers and esters;
  (2) Polyphenyl ethers containing more than three phenyl groups;
(b) Oils and greases which contain as their principal ingredient esters of trimethylol propane or trimethylol ethane or pentaerythritol with saturated monobasic acids containing more than six carbon atoms.

Explanatory Note: Sub-item (b) covers only formulated lubricants, not the esters themselves.

Excluded from parts (a) (1) and (b) above are those oils and greases containing by weight either

(a) not less than 50 per cent of neutral castor oil; or
(b) not less than 5 per cent of neutral castor oil and not less than 50 per cent of castor oil and petroleum oil together.

Reasonable quantities of appropriate types of lubricants described in sub-item (b) above for use in civil aircraft being exported, or having been exported.

Group J. Synthetic Rubber and Synthetic Film

1801. Synthetic rubber, the following:

(a) Alkyl polysulphide liquid polymers;

  Explanatory Note: The definition is intended to cover polymers which are themselves liquid. Water dispersions, otherwise called latices, are not covered.

(b) Fluorinated silicone rubber and other fluorinated elastomeric material and such organic intermediates for their production as contain 10 per cent or more of combined fluorine;
(c) Polymeric products of butadiene, as follows:
  (1) Carboxyl terminated polybutadiene; hydroxyl terminated polybutadiene; thiol terminated polybutadiene; and cyclised 1,2-polybutadiene;
  (2) Mouldable copolymers of butadiene and acrylic acid;
  (3) Mouldable terpolymers of butadiene, acrylonitrile and acrylic acid or any of the homologues of acrylic acid;
(d) Carboxyl terminated polyisoprene and polyisobutylene.

1920. Synthetic film of a thickness not exceeding 0.0254 mm (0.001 in.) capable of being used as a dielectric in the manufacture of capacitors covered by Item 1560, made from the following:

(a) Polysulphone (not otherwise covered by Item 1746);
(b) Polycarbonate capable of being used in the manufacture of capacitors that can operate permanently without derating at temperatures exceeding 115°C (239°F);
(c) Fluoro-carbon compounds covered by Item 1754.

Explanatory Note: The production of a dielectric film requires not only a low thickness tolerance but also the constant permittivity of the insulator used.

Excessive inflation the 'dirt in the machine'

—Mr. John Davies

INVESTMENT by British industry is not held back by timidity or lack of new ideas, but by excessive inflation, the Secretary of State for Trade and Industry, Mr. John Davies, said at Loughborough University of Technology last week. Mr. Davies visited the university to open new halls of residence and to receive an Honorary Doctorate of Technology.

'It is not the result of any inborn timidity of our people—our history suggests the complete reverse', said Mr. Davies. 'And I don't believe the national character has changed. Nor is it held back by a lack of new ideas. The British are still an original nation, able to live up to their reputation for invention and innovation. These things have not changed. But excessive inflation acts like dirt in a machine, clogging the mechanism making it work stiffly in the short term—damaging it in the long.

'During the latter part of the sixties the investment surge evident in countries like Japan, Germany, France and Italy was not matched here. With our economy moving only sluggishly and jerkily forward there was inadequate incentive to our industries to move dynamically forward either in replacement or in innovational investment.

Industrial disharmony

'The Government resolved to change that pattern and undertook a series of measures in the fields of taxation and financial policy to unfetter the economy and to encourage it to expand not convulsively but in an orderly and continuous process. The realisation of these plans was beset by serious problems in the fields particularly of industrial disharmony and excessive inflation. Despite the problems the economy has been on an expansionary trend since July 1971 and at present growth is moving smoothly forward in the direction of the forecast rate of 5 per cent. But still that growth has not resulted in a sufficient increase in investment.

'It is against this background that we must consider the efforts that have recently been made to overcome the excessive inflation to which I have referred. The immediate proposals are short-term and over the next 12 months. But the effects of success or failure in the exercise will be with us very much longer than that.

'Those efforts have by no means been made alone by government. The tripartite talks which have been going on throughout the summer represent the determination on the part of employers, unions and government to overcome the industrial impediments which we face and whose existence can only damage every part of our community and can only therefore be desired by those for whom the disruption of that community is an objective.

'The culmination of these talks proceeding at many levels—not just the ministerial—came last week when the government responded to the direct request of the union representatives to table specific proposals for consideration.

Help for lower paid

'To have any chance of success those proposals needed to be in fact, and in appearance, clear, fair and reasonable. The expression "fair and reasonable" is one we all know—the application of it to a given set of circumstances can be both difficult and controversial.

'To be "fair" the proposals had to take account of the plight of those whose suffering from the problems I have mentioned is both acute and unrepresented at the bargaining table—the pensioners, the dependant and the low paid. But they could not ignore either the natural demands of both wage and salary earners to share in the growth of national prosperity nor the need of the country for a greater allocation of national resources to the reward for and stimulation of investment.

'I think few could claim that the result of the Government's deliberations was other than fair. The "special case"—if I may use an expression which has received some currency—is the case of the low paid and to these goes the main emphasis in the total package. But the pensioner would get a material advance in his situation as compared with recent years. The wage-earner would enjoy a real addition to his purchasing power the balance being tipped in favour of the lower end.

'All from chairman downwards would be taken into the scheme

Mr. John Davies, Secretary of State for Trade and Industry, visited Loughborough University of Technology last week to receive the honorary degree of Doctor of Technology and to open two residential buildings for students. In the picture on the right Mr. Davies (centre) is seen with Lord Pilkington (right), Chancellor of the University and chairman of Pilkington Bros. Ltd., glass manufacturers, and with the Vice-Chancellor, Professor E. J. Richards. The picture on the left shows the Secretary of State inspecting textile machinery developed within the University; in the background is Mr. R. E. Hancock, Mayor of Loughborough. A number of industrialists were present as guests of the University in recognition of industry's financial support in providing a thousand more residential places for students.

with no differential advantage save to the lower paid. Investment would be stimulated both by the allocation of a somewhat greater proportion than in the immediate past of the total increase in resources and by the assurance of a limit to the debilitating inflation which has so affected it.

Harmonious management

'All would recognise that the 12 months of this regime would be a prelude to a more orderly and a more harmonious ordering of our national management than has been the case over past years. I challenge any section of the community to show that these proposals are other than "fair".

'But are they "reasonable" too? I strongly maintain that they are so. The economic argument which supports them is sound. The increase in national resources that that argument postulates has not been seriously challenged. "What the country can afford" has not been treated with subjective imprecision but on the contrary assessed on the basis of the real outlook of national production and demand.

'What the argument cannot encompass is the effect of any one part of the community demanding a larger share of the total increase in resources without some other part suffering a diminution. Just because the economic argument is sound and sustainable if you seek to enlarge the package in one area you will have to compress it in another. This is the reality with which all are faced.

'If we turn our backs upon it the inevitable consequence must either be a continuation of the purposeless inflation which has so gravely undermined our prospects or the tackling of it by means which are inimical to us all and hard to reconcile with our whole approach to self-government—the approach of co-operation and voluntary restraint by individual sections of the community in the interests of the whole.'

Guidelines for Industrial Development Boards

GENERAL guidelines for the Industrial Development Boards set up by the Government in the Assisted Areas of the UK to advise on industrial opportunities are now published. The guidelines will be used in assessing applications from industry for selective financial assistance under Section 7 of the Industry Act, 1972.

Three of the boards—in Scotland and in the Northern and South-West regions—are now fully operational. The boards for the other three assisted areas of the UK—Wales, Yorkshire and Humberside and the North-West—will be announced in the near future. All board chairmen have been appointed.

In publishing the guidelines, Mr. Christopher Chataway, Minister for Industrial Development, said: 'We have been fortunate to secure as members of the boards many of the most able people in industry and commerce in each region. With the strengthening of our regional offices and the appointment from outside of industrial directors, we now have in Scotland, Wales and in the four assisted English regions, the capacity to assess and monitor projects and the capacity to search out opportunities. Within these guidelines, each region will therefore be able to act with speed and with a full understanding of the regions' problems'.

The guidelines are as follows:

Viability

The Government's main aim and priority in providing assistance under Section 7 will be to encourage sound industrial projects which will improve the employment prospects of the assisted areas. An important part of the Board's work therefore will be to assist in assessing the viability of undertakings seeking assistance.

Types of project

Projects qualifying for assistance with which the Regional Industrial Boards will be concerned fall into two broad categories:

A new projects and expansions which create additional employment

B projects, eg for modernisation or rationalisation which will not provide extra jobs but will maintain or safeguard existing employment.

There may be exceptional cases which will fall into neither of these categories and these will need to be decided in the light of the circumstances. But the Regional Offices of the Industrial Development Executive and the RIDB's will be associated with the consideration of these cases where practicable.

Employment link

Assistance will only be provided where there is a benefit to employment. For category A cases account will be taken of the amount of new employment to be provided in determining the amount of assistance. Similarly, for category B cases the employment implications will be a relevant consideration in deciding the amount of assistance to be offered.

Public sector contribution

Applicants will normally be expected to ensure that the greater part of the cost is provided from outside the public sector.

Forms of assistance

Category A (employment creating projects) will have preferential treatment and may qualify for:

(i) loans at concessionary rates. They will vary from time to time and will have relation to commercial interest levels but will normally be somewhat lower. Initially the rate will be 7 per cent. Where appropriate, an initial interest free period may be allowed.

(ii) as an alternative, an interest relief grant may be offered for moneys obtained from private sources. The amount and rate will be kept under review but initially the grant will be at a rate of 3 per cent per annum of the amount of any loan which might otherwise have been offered from public funds, for a period of up to four years depending on the circumstances of the project.

(iii) removal grants (where an undertaking is transferred into the assisted areas from another location in Great Britain) of up to 80 per cent of reasonable costs of removal of plant and machinery, stocks and materials and the employer's net statutory redundancy payments at the old location.

Category B (modernisation and rationalisation projects which do not create additional jobs). These projects will be assisted only where finance cannot reasonably be obtained from commercial sources; the assistance will be in the form of loans at broadly commercial interest rates.

Eligible industries

Broadly, these will cover projects in the manufacturing, construction and mining industries.

Assistance to the service industries will be concentrated on mobile projects* which will make a significant contribution to the employment needs of the assisted areas, eg potentially mobile service projects which will provide 10 or more new jobs. Projects serving primarily local needs, eg retail shops or similar local services will not be assisted.

Projects will not normally be assisted under Section 7 if adequate provision for Government assistance is made under specific schemes, eg the Ministry of Agriculture, Fisheries and Food schemes for agricultural, horticultural and fishery projects and the provision for tourist projects under the Development of Tourism Act 1969, or if assistance is being sought under alternative schemes (eg from the Development Commission).

Procedures and delegation

Regional Offices, with the assistance of their Industrial Development Boards, will have discretion to decide cases falling within these guidelines up to certain limits. In the case of loans it is intended that the limit shall be £1 million, but initially loans of between £½ million and £1 million will be decided in consultation with the Industrial Development Executive.

Industrialists seeking further information on Selective Assistance should contact The Department of Trade and Industry regional offices or the Industrial Development Executive at Millbank Tower, London, SW1P 4QU.

* Projects which have a genuine choice of location between the development and intermediate areas on the one hand and the rest of the country on the other.

Mr. Tom Boardman, Minister for Industry, recently visited two private steelworks in Sheffield—Dunford Hadfields Ltd. and Brown Bayley Steels Ltd. He is seen here in the machine shop of Dunford Hadfields at Hecla Works. From the left: Mr. T. W. Pease, senior manager, roll products; Mr. Boardman; Mr. T. W. Baugh, production director; and Mr. A. R. M. Graham, DTI Regional Industrial Director for Yorkshire and Humberside.

Development Minister on hurdles to industrial progress

IN every region of the UK there are now clear signs of an investment potential that could be very substantial, Mr. Christopher Chataway, Minister for Industrial Development, told a *Financial Times* conference on regional development in London on October 3. 'In Scotland, Wales and in the four English assisted regions, discussions are now proceeding on specific projects with over 100 firms —and some of these projects are large enough to have an important effect on our unemployment problems,' said Mr. Chataway.

'It is apparent to us from the level of inquiries that businesses large and small, at home and abroad, are realising the opportunities afforded by the regional incentives now on offer. A major advertising campaign through this winter will drive home the message. The new organisation at the centre and in the regions—strengthened by an injection of industrial and financial skills from outside the Civil Service is now fully in business. We have the services, part time and full time, of some of the most able people in British industry. There is the capacity in this new organisation for more effective assessment and monitoring—and the capacity to play a more positive part in seeking out the opportunities.

'So the men are there, the money is there, the interest is there—and the confidence is almost there. To convert promise into real progress two things are needed. Two hurdles have to be cleared.

'First there are too many industrialists who dismiss certain of the assisted areas from consideration because of an image of strikes, sit-ins and general bloody mindedness. They should look behind the headlines and probe a little deeper. Certainly over these past months I have come across some cases, where remote uncaring management has left a trail of bitterness, or where mindless militancy has thrown away badly needed jobs and damaged the reputation of the region.

Willingness to work

But in some of those very areas, in which every bit of trouble is most regularly given banner headline treatment, I frequently meet firms with a very different story to tell. In every one of those areas, which some are inclined to write off because of poor industrial relations, we can show you firms with a long record of industrial harmony. We can introduce you to firms, who came unwillingly to the region in the first place maybe because they could not expand elsewhere, and who will tell you that it was the best thing that ever happened to them, that they found an availability and an adaptability of labour and a willingness to accept hard work that they have never found elsewhere.

'So my advice to investors, worried about industrial relations in some of the regions, is not to fall for the glib generalisations, but to talk to a representative cross-section of managers and shop stewards; and a very different picture will often emerge.

Accelerated inflation fear

'The second and more important hurdle we have to clear is the fear of accelerated inflation. I have spoken of the massive regional programme upon which the Government has embarked and which we are determined to sustain. But we should all recognise that if the country were to allow inflation to get out of hand there is nothing any Government could do to stop unemployment in the regions from climbing still further. We should be pricing ourselves out of business and jobs of all kinds could melt away.

'The Government after thorough discussion with the TUC and the CBI have put forward plans for co-operative action to beat inflation. Of course there have to be further negotiations. Of course there is resistance from some of those who think they have got the industrial strength to wrest more for themselves out of the kitty. But if they were to wreck an anti-inflationary compact, it would be the regions with the highest unemployment that would suffer most. Their salvation depends upon investment.

'Investment depends upon the prospect of steady growth. Continued steady growth depends upon stifling the inflationary menace. We have made considerable progress against inflation. A rate of price inflation of 11 per cent has been brought down to 6½ per cent. But if we are going to stop the graph from turning up, joint action is required from Government, management and unions.

'Some have argued that it can be done just by Government, just by unions or just by employers. Some say that it is for Government alone. Some argue that the answer lies just with unions, but they cannot restrain their demands until their members and their wives are satisfied that price increases can really be held. Some again contend that employers alone can do the trick by restraining prices, but if they do that without growth and with rising wages they will soon be bankrupt.

'There is no alternative then to joint action by Government, unions and employers, and it is clear that the vast majority of the country support the broad outlines of the Government initiative, which proposes to give the principal advantage over the coming year to the elderly and the low paid. The proposals are also of central importance to regional policy. Without the two quid truce all our efforts to reduce unemployment in the regions could be brought to nothing.'

Industrial Development Unit senior appointments completed

THREE further appointments at Deputy Director level have been made from outside the Civil Service to the Industrial Development Unit of the Department of Trade and Industry; they complete the senior appointments to the Unit.

Mr. M. C. Ashworth, a director of P.A. Management Consultants Ltd., will be primarily concerned with appraisal of the managerial and technical aspects of companies or projects.

Mr. J. G. Salkeld, a partner in Binder, Hamlyn & Co., will be primarily responsible for the financial appraisal of companies applying for selective assistance.

Mr. A. W. Kay, of British Leyland Motor Corporation, will be particularly concerned with the monitoring of companies which have received financial assistance.

All three Deputy Directors are on secondment from their firms.

Within the Industrial Development Executive the Unit's role is to help with the appraisal and implementation of industrial development needs. It has a special concern with the powers to give selective financial assistance under Part II of the Industry Act 1972. Staff for the Unit are being recruited from the City and industry, as well as from within the Civil Service, to provide a full range of financial, industrial and administrative expertise.

The Director of the Unit is **Mr. G. S. Stone,** whose appointment was announced in July. **Mr. A. J. Lippitt** is Deputy Director responsible for industrial studies. The other senior member is **Mr. P. L. Gregson,** who is also Secretary of the Industrial Development Advisory Board.

Welsh Industrial Development Board appointed

MR. Christopher Chataway, Minister for Industrial Development, after consultation with the Secretary of State for Wales, has appointed the following as members of the Welsh Industrial Development Board.

Mr. Z. Brierley—Chairman and Managing Director of Z. Brierley Ltd., Llandudno Junction. Member of Welsh Council. Director of Development Corporation for Wales. Member of CBI Wales Council.

Mr. G. Craven—Local Director of Barclay's Bank for Swansea and West Wales. Member of the Welsh Council.

Mr. A. Kirkwood—Divisional Officer NUR South and Central Wales. Member of the Welsh Council.

Mr. G. Metcalf—Senior Partner, Deloitte and Co. (South Wales).

Mr. D. R. Ross—General Manager of Parke Davis and Co., Pontypool.

Mr. J. M. Thomas—Managing Director of Rank Xerox Ltd.

Mr. H. Williams—Chairman and Managing Director of John Williams of Cardiff Ltd.

The appointment of Mr. Duncan A. C. Dewdney, as Chairman of the Board was announced on August 21. All the appointments are part-time and unpaid.

The Government White Paper *Industrial and Regional Development* (Cmnd 4942) published on March 22, announced that Industrial Development Boards would be set up in Wales, Scotland and in the Northern, North-West, Yorkshire and Humberside and South-West regions of England, to advise the strengthened local offices of the Department and to advise generally on local industrial opportunities and in due course on applications for selective financial assistance for the development of industry in their areas.

Success hampered by a 'fearful handicap'

—Mr. John Davies

SPEAKING at Ashbridge Management College, Berkhampstead, on Friday, Mr. John Davies, Secretary of State for Trade and Industry said he confessed to some annoyance with those who denigrated the qualities of our management. 'They are for the most part people who have had little if any experience of managing a complex concern. I don't necessarily mean a big one,' he said. 'I do mean that kind of concern which presents problems of a varied kind—problems of finance, of staff, of competition, of research and design, of production and, of course, of marketing. Whether all those problems ultimately coincide in a single decision-taker or whether they are distilled through individual responsibilities to the kind of concensus mechanism that a board very often is, the difficulties of management are considerable. They are compounded in a situation of low growth, industrial tension and low profits. Nothing succeeds like success they say. They should perhaps add that nothing stultifies like stagnation.

'The climate within which our managements have had to demonstrate their qualities during the last decade has been a depressing one. Naturally, there have been the success stories—either successes intrinsically and individually or successes snatched in the teeth of adversity. But in these last 10 years and maybe more, success has been a case of fighting up from the trough of the wave—not riding its crest.

Problem of inflation

'Our whole strategy as a government is to change that climate. To move into a sustained and high rate of growth. To get industrial relations back into a state of equilibrium—stressing the interdependence and rejecting domination by either side. To encourage the return to a healthier level of profitability and with it a healthier level of investment. I won't run over the whole range of government policies directed to these ends but I will say something about those concerned with the most intractable and at present the most universal of problems with which we are faced—that of inflation.

'Inflation is damaging to every section of the community save perhaps those who successfully speculate upon it. All of us are aware of its special penalty on the old and the defenceless. But it is no less a fearful handicap to industrial success and thereby to management. It is an added factor to the deterrents to good management I have earlier mentioned. It falsifies the very basis of analysis —the realism of accounting. It adds vastly to the unavoidable uncertainties of forecasting and budgeting. It provokes industrial strife. It creates uncertainty as to the durability of economic policy. It is an evil unredeemed by any qualities I can ascertain save for those who have developed an expertise in gaining advantage from it generally at the expense of the rest of the community.

Defeating inflation

'The defeating of inflation is, therefore, a purpose which the government pursues in the certain knowledge that it is one in the interests of the whole nation. It is entitled to ask the nation as a whole to co-operate in the achievement of that purpose. If all the penalties inflation imposes are to be relieved then all those who can do so must bear their part of the burden of restraint. I think everyone recognises that what has now come to be termed the Chequers package is a very fair and reasonable set of proposals. Of course there have been objections. Several unions have said that they cannot be satisfied with two quid a week. A number of authorities has doubted whether we can achieve a growth rate of 5 per cent—despite the fact that we are well on the way to achieving this rate which is nearly double the average of the last decade.

'On the other hand Mr. Vic Feather says we are not aiming high enough and that we should go for 6 per cent. I would dearly like to agree with Mr. Feather. I hope he is right. But we must be realistic and I think—as indeed do the Government—that we cannot base our very careful economic projections on more than 5 per cent. Five per cent is an integral part of the economic model on which we have been working.

'Then we have the problem of prices. There are those who say that we cannot expect to hold prices of manufactured articles

within a price increase level over the next 12 months of 4 per cent or retail prices within 5 per cent. But I would ask you to note what the CBI have achieved on a voluntary basis over the last 18 months. We believe that by the enlistment of the support of management, retailers, workers and above all public opinion we can achieve in this essentially democratic and voluntary society of ours a level of restraint which will meet our object. Then there are the other vital ingredients of the package—the possibility of threshold agreements and the action which the Government would be prepared to take on behalf of pensioners.

Chequers talks

'Since Chequers there has also been much talk of dividend limitations and profits on land and property speculation. All these things we are willing to look at though on the first we must be careful to see that we do not put a brake on company investment plans which, I'm glad to say, are now beginning to pick up encouragingly; and on the second I draw attention to the very severe rates of capital gains tax and other taxes which affect those who make gains in property and land sales.

'Where does all this get us to? It gets us to the point, I sincerely hope, where at Chequers on October 16 we can reach agreement with the recognised leaders of industry and labour in this country on a total package which will command agreement. The twin main defects in our national order at the moment are the plight of those who have low incomes in the midst of a prosperous society; and the inadequacy of investment to maintain and promote that prosperity. These are the priority objectives of the containment of inflation. These are the priorities that surely only greed and egotism could reject. I pray they will not be rejected. The conquest of excessive inflation is a must—not least in order that our managements should have the opportunity in a fair climate to show their real mettle.'

DTI understands shipping industry's problems

—Lord Limerick

THE shipping industry is a truly international business and thereby sensitive to world wide factors, many of which are outside the control of the UK shipowner, Lord Limerick, Parliamentary Under-Secretary of State for Trade, said in London on October 6.

Addressing the Society of Consulting Marine Engineers and Ship Surveyors, Lord Limerick went on to say that vast upheavals in sea transport have been caused by such single events as the opening of the Suez Canal creating a short route to the Far East, and now the closing of that Canal and the emergence of the giant oil tankers of sizes undreamed of 20 years ago when the Canal itself based limitations on size and, in a way, stifled development.

'The changing face of world politics also plays a part, not least in the national, and natural aspiration of emerging nations and states to find expression in controlling their own trade and industry and in creating special competition for the carriage of their needs, their products and their natural resources. Finally, there is the development of world resources of food and power and the highly specialised modes of transport which evolve from the distribution and the exploitation of these resources as, for example, the carriage by sea of natural gases and extracted petroleum products, or of the vast increase in the carriage of bulk chemicals on a scale unthought of only ten years ago. These changes have been faced, and are continuing to be faced every day by the Shipping Industry with considerable resourcefulness, and no doubt each member of the Society here will be able to add examples from his own experience.

'There was a time when a shipowner could confidently expect to recoup his capital outlay for a new ship after a few years of running and thereafter a measure of profitability for its remaining years in, say, a 25 year lifetime. Nowadays it takes great genius to forecast the employable future of a ship, and to design to meet these needs, knowing that an assumption of profitability in a particular field can rapidly be overtaken by market developments. The penalty for failing to keep up with new demands is increasing at the same time as the cost of pioneering increases, against a background of fluctuating profitability and financial risk inevitably large in relation to the enterprises which shoulder it. This is particularly so in relation to the specialised liquid gas carriers, OBO's, container ships and chemical tankers which account for a growing percentage by value of the world's shipping fleets.

'Much of the modern pressure resulting from technical advance is felt also in Government Departments and, as you will know, the simple fact that many ships are built abroad for United Kingdom owners has at times strained the resources of my own Department to carry out the surveys of these ships without hindrance to the industry.

'Consequently, as many of you probably know, my Department and Lloyd's Register of Shipping are currently examining the possibility of more statutory survey work being delegated to Lloyds. We have set up a joint steering committee to examine whether we can make greater and effective use of an outside body with a very high reputation and world wide organisation working with us.

Safety at sea

'In matters of safety at sea it is vital that standards should keep pace with the new designs of ships, the new materials and production methods available and with frequent assessment of the hazards involved in many of the modern cargoes and their modes of transportation.

'Many subjects are under discussion in IMCO, and some will lead to changes in international regulations, but this does not happen until every facet of new proposals and their problems has been thoroughly discussed and agreed by all governments comprising the membership. It is not surprising, therefore, that the pace of progress is less than meteoric and frequently the development of special ships to meet special needs runs well ahead of existing international and national rules, thereby causing frustration to the developers and their designers.

'Sometimes it happens that development is too fast, and after vessels have entered service rules are formulated from experience which touch on problems which were not given a great deal of thought by the designers at the time of building, as for example, the limitation of tank sizes in respect of oil pollution, or the explosive hazards of large tankers in ballast and the navigational problems of large ships in narrow and congested waters. On the other hand, new regulations are also being formulated which arise from the natural development of safety standards, and so it is likely we shall see the emergence of new standards of fire protection for cargo ships and oil tankers which will draw on the techniques and materials developed for fire protection in passenger ships.

'You may perhaps take comfort from the fact that the problems which the shipping industry face are understood by my Department. We applaud your triumphs, we feel for your difficulties and disasters, and whenever possible we give practical help in the fairest and most effective ways we can devise.'

New measures to warn rogue shipping in the Channel

MR. Michael Heseltine, Minister for Aerospace, who has responsibility for marine affairs, announced on October 4 the intention to introduce a signal to be communicated to any ship going the wrong way in a Channel shipping lane and that he was proposing to promulgate this through Notices to Mariners shortly. He added: 'I am also considering other measures of surveillance and warning using fast craft.' Mr. Heseltine was welcoming the International Conference on Regulations for Preventing Collisions at Sea, organised in London by the Inter-Governmental Maritime Consultative Organisation.

'The present Collision Regulations are the fruits of the 1960 Conference on the Safety of Life at Sea, held also in London,' Mr. Heseltine said. 'Prior to that, only two International Conferences dealing with Collision Regulations had been held, in 1889 and 1948. In view of that time scale, it may seem that 1960 was not very long ago—indeed, I notice that this Conference will have the benefit of the experience of several of those who participated in 1960.

'However, the last 12 years have seen changes in the nature of

shipping and of shipboard practice, in marine engineering and in navigational aids and techniques, which amount to something little short of what could be called "the quiet maritime revolution". This was made very clear at a Conference I chaired yesterday on marine technology which discussed problems many of which had not even been identified in 1960. Ships of a size, speed and electronic sophistication once undreamt of have become almost commonplace. As a result, the whole maritime environment has changed radically, and, more important, will continue to change. It is, therefore, incumbent upon us, as those responsible for regulating navigational practice, to embrace new concepts to meet these new requirements; and we must address ourselves not only to the changes that have already taken place, but also to those we can reasonably anticipate, so that what we frame in the coming weeks will have continuing relevance and validity. Forecasts of marine traffic show that an ever increasing volume of traffic is likely in the 1980s.

'Meanwhile the collision in the Dover Strait last Sunday has underlined for us in the UK only too clearly the need for this Conference.

'Fortunately, there was no loss of life but the accident right in the middle of these crowded shipping lanes could easily have been as serious as the tragic collisions there last year. My officials are making urgent inquiries into the circumstances of the incident and it would seem that one of the vessels involved was in the wrong traffic lane. I note that one of the draft new rules before you relates to traffic separation, a vital new technique developed since the last Conference primarily because of the collisions in the Dover Strait and now taken up all over the world. To bring these schemes into the framework of the Collision Regulations is, I am sure, one of the most important tasks for the Conference.

'The best way of dealing with the dangers of crowded waterways, like the Channel, is to secure international agreement to effective measures. But I am well aware that this takes time which we can ill afford when dealing with the dangers of collision in the Channel. Our Government has taken the lead in imposing the rules of IMCO's traffic separation schemes on UK shipping on a statutory basis and I very much hope that the other countries represented here will take similar action as a matter of urgency.

'In preparing the new rules, I am sure it is important not to lose sight of the simple objectives which underlie the Collision Regulations. Their purpose is to provide the mariner with a consistent code of practice to which he can refer with confidence when taking decisions on manoeuvering his ship. To this end, they must be concise, comprehensive and unambiguous—drafted *for* the mariner with an eye to his practical operational needs rather than imposed on him as an administratively tidy package of regulations.

'It may be felt that the construction of such a code would require the wisdom of Solomon; indeed, I think it does, but I have every confidence that such wisdom will be readily discernible in the ensuing deliberations.'

The need for a co-ordinated marine technology policy

THE need for a co-ordinated Government policy towards the developing British marine technology industry was accepted by Mr. Michael Heseltine, Minister for Aerospace, summing up at a one-day conference of 300 industrialists he had called in London as an 'exercise in participation between industry and Government'.

Mr. Heseltine said that he and DTI would study all the points raised during the conference. He thought the main themes to emerge were:

(i) British industrialists believed that there was some form of discrimination practised overseas, which worked against the interests of industrialists in this country.

(ii) Speakers had felt there was a lack of sufficiently sophisticated data and data processing services, especially in the areas of meteorology, the marine environment, and charts suitable for deep draught vessels.

(iii) There was a particular interest in safety aspects, especially in the English Channel, where a great deal of work was going on in the study of navigational problems, but also where one had to reach international agreement to find effective methods of control.

(iv) There was a need for improved educational and training facilities, and the Minister wished particularly to see how this could be achieved.

The Minister for Aerospace said that he would shortly be announcing details of Requirement Boards, which would include a Ship and Marine Technology Board.

Earlier, Mr. Henry George, DTI Oil Division, Department of Trade and Industry, said that it should be possible for British industry to capture a major share in the construction effort involved in the exploitation of oil and gas in the North Sea and elsewhere. About £1,500 million would be spent on this exploitation in the next 10 years, and a very wide range of equipment would be required. So far largely conventional equipment had been used in the initial finds in the Southern North Sea, but the finds in deeper more Northern waters had completely changed the picture. The new oilfields would be in deeper water, and in worse weather and sea conditions than any others in the world. Much further research would have to be done, and materials other than steel were now for consideration for offshore structures, including scope for realising the potentialities of reinforced concrete.

Mr. Peter Twinn, DTI Research Division, introducing a session on underwater engineering, referred to the need to develop new techniques, including the laying and inspection of underwater pipelines, the development of means of controlling oil and gas wells from underwater, and underwater inspection of structures at sea.

Mr. James Paffett, Ship Division, National Physical Laboratory, said that first priority in improving safety at sea should go to items which could raise the level of seamanship in ships of all nations, including training simulators and the improvement of control systems and bridge ergonomics. He also suggested that improvements to charts, and research and development of ship handling at low speeds and in exposed moorings should have priority.

Review of aircraft minimum noise routes

MR. Cranley Onslow, Parliamentary Under-Secretary of State for Aerospace, is to ask the Secretary of State for the Environment to invite the Noise Advisory Council to undertake further studies into minimum noise routeings of aircraft from major airports.

The proposed reference to the Noise Advisory Council follows representations from Members of Parliament, arising from the coming into operation of the new Burnham navigational beacon on July 21 and of a revised track for the Mole Valley route for a trial period from July 20. Dr. Alan Glyn (Windsor), Mr. Ronald Bell (S. Bucks), Mr. John Hall (Wycombe), Mr. Carol Mather (Esher) and Mr. Toby Jessel (Twickenham) have all seen Mr. Onslow recently.

At these meetings Mr. Onslow said sample radar checks had been maintained by the CAA at the request of the DTI since revised routes were introduced. Officials of DTI and CAA have also made

King & Co
Chartered Surveyors
1 Snow Hill
London EC1A 2DL
01-236 3000 Telex 885485
Also at Manchester & Leeds
Industrial and commercial property plant & machinery valuers

visual observations. Both checks indicated that the revised procedures were achieving the objective of confining aircraft to prescribed minimum noise routes, and continuing checks would enable the Department to consider further possible modifications. But though this more accurate adherence to the routes has brought relief to many residents in a wide area, the more precise concentration of aircraft has also caused a significant increase in complaints from areas most affected by this concentration such as Maidenhead and Taplow to the West of Heathrow and the Hampton and Molesey areas to the East of the airport.

Mr. Onslow added that the prevailing policy of using minimum noise routes had already been considered by a Working Group of the Noise Advisory Council and that the practice had been broadly endorsed in its report, *Aircraft Noise: Flight Routeing near Airports*, published last year. However, since the report also stated in its recommendation number 32: 'For the sake of people living under minimum noise routes, we conclude that there is need for research to establish if there is a limit to the level of disturbance to which people can be asked to accept', he had decided to ask that the Noise Advisory Council should now study this point more closely in the light of experience of the Burnham and Mole Valley routes, and report back as soon as possible.

In announcing this initiative Mr. Onslow also took the opportunity to outline other features of the Government's current programme to reduce aircraft noise disturbance. Most important among these are the virtual ban on summer night jet take-offs at Heathrow, greater restriction on night movements at other major airports, and the encouragement being given to the introduction of quieter jet aircraft such as the Lockheed TriStar. Mr. Onslow stressed that the Government's massive support for the RB 211 and the development of other quiet jet engines offered the greatest prospect of long-term relief from aircraft noise while the opening of London's third airport at Maplin in 1980 should make it possible to redeploy a significant number of aircraft from inland airports.

Terms of reference

The Noise Advisory Council was established in 1970 with the following terms of reference:

'To keep under review the progress made generally in preventing and abating the generation of noise; to make recommendations to Ministers with responsibility in this field and to advise on such matters as they may refer to the Council.' Membership consists of a broad cross-section of expert and lay opinion. The Chairman is the Secretary of State for the Environment.

In its report, *Aircraft Noise: Flight Routeing near Airports*, the Noise Advisory Council's Working Group endorsed the policy of minimum noise routes in the following terms: Recommendation No. 31: 'For aircraft departures, we conclude (i) that total concentration and total dispersion are both impracticable policies; and (ii) that the balance of social advantage must lie, for all airports, with a policy of the maximum concentration of traffic along the fewest possible narrowly-defined Minimum Noise Routes, which is broadly the policy presently being followed.'

The Burnham VOR is a new navigational beacon installed with a view to improving track keeping accuracy on the westerly departure routes from Heathrow. In particular, it was designed to reduce noise disturbance by routeing aircraft with greater precision throughout the narrow gap between Eton and Slough.

The revised Mole Valley route was introduced with a view to reducing noise disturbance by taking advantage of the open space afforded by Fulwell golf course and Bushey Park.

Prevention of Fraud (Investments) Act 1958

DEALERS IN SECURITIES

THE following changes have taken place in the lists of dealers in Securities under Sections 3 and 16 of the Act:

Licensed Dealers

Additions

Coupon Finance Co. Ltd., 31 St. Paul's Churchyard, London EC4M 8DB.

Anthony Wield & Co. Ltd., 4 Tokenhouse Buildings, Kings Arms Yard, London, EC2.

Queen Street Trust Ltd., Wendover House, 24 London End, Beaconsfield, Bucks.

Frank Binning Wolff, Richard Irving Batchelor, Douglas John Jackson (Jackson Graham Moore & Partners), 130 Fenchurch Street, London EC3M 5DJ.

Rutland Guarantee Ltd., 36 St. James's Street, London SW1A 1JE.

Fulton Packshaw Ltd., 58 West Smithfield, London, EC1.

L. J. Forget (UK) Ltd., 11 Old Jewry, London EC2R 8DS.

Rauel De Virieu, Robert Chevruex, Paul de Sercey (R. Chevreux, R. de Virieu & Cie), Rooms 60A and 61 Moorgate Station Buildings, London, EC2.

Allside Asset Management Co. Ltd., c/o Arthur Young McClelland Moor & Co., Moor House, London Wall, London, EC2.

Change of Address

Ralli International Ltd., 46 Berkeley Square, London W1X 5DB.

Exempted Dealers

Additions

Anglo American Gold Investment Co. Ltd., 40 Holborn Viaduct, London EC1P 1AJ.

Brown Harriman International Ltd., 41 Eastcheap, London EC3M 1HX.

First National Boston Ltd., 5 Cheapside, London EC2P 2DE.

Gerald Quin Cope & Co. Ltd., 52-54 Gracechurch Street, London EC3V 0EA.

Deletions

West Rand Investment Trust Ltd., 40 Holborn Viaduct, London EC1P 1AJ.

Cassel Arenz & Co. Ltd., City Wall House, Finsbury Pavement, London, EC2.

Lloyds Bank Europe Ltd., 100 Pall Mall, London, SW1.

Quin (Gerald Quin Cope & Co.), 7 Birchin Lane, London, EC3.

Thomas Albert Mason.

Brian Michael Savill.

Peter Cyril Savill.

Victor Ralph Harrod.

AUTHORISED UNIT TRUST SCHEMES

THE following amendments have taken place in the list of unit trust schemes authorised under Section 17 of the Act and published in Part 5 of the 1972 Particulars of Dealers in Securities and of Unit Trusts.

Additions

Group and/or name and address of Management Company	Name of scheme	Name and address of Trustee
New Court Fund Managers Limited, PO Box 185 New Court St. Swithins' Lane London EC4P 4DU	New Court International Fund	National Westminster Bank Limited, 41 Lothbury London, EC2
Slater, Walker Trust Management Limited, Leith House 47-57 Gresham Street London EC2V 7EP	Slater, Walker Professional Trust	National Westminster Bank Limited, 41 Lothbury London, EC2
Rowe & Pitman Management Limited, Woolgate House Coleman Street London EC2R 5BL	Rowan International Fund	National Westminster Bank Limited, 41 Lothbury London, EC2
Barclays Unicorn Limited, Unicorn House 252/6 Romford Road London E7 9JB	Unicorn Professional Associations Trust	Royal Exchange Assurance Royal Exchange London, EC3

Changes

The name of Save and Prosper Atlantic Units has been changed to Save and Prosper United States Growth Fund.

New sawmill at Fort William

A NEW sawmill is to be erected at Fort William by A. G. and W. J. Riddoch, which the Forestry Commission will supply with 50,000 tons of sawlogs annually under an eight-year contract. The rest of the mill's intake will be from both private woodlands and the Forestry Commission. Residues from the sawmill will go to Messrs. Wiggins Teape Limited's pulp and paper mill at Fort William.

The project, which marks a significant contribution to the modernisation and rationalisation of the sawmilling industry in North Scotland, has received the strong support of the Highlands and Islands Development Board. As it will become one of the country's largest users of its natural wealth—trees—it is both an important development in the work of the Forestry Commission and that of the British sawmilling industry.

Metric packs for sugar

PRE-PACKED sugar is one of a number of basic foods which, under the provisions of Schedule 4 to the Weights and Measures Act 1963, may only be sold in prescribed imperial quantities. In the White Paper on Metrication (Cmnd 4880) the Government announced that it would be prepared, after due consultation with industry and consumer interests, to introduce legislation which would permit a range of specified metric quantities also to be used.

The Department of Trade and Industry has been asked by sugar refiners whether it will permit the sale of all grades of sugar in metric packs and it is now consulting interested organisations about the terms of a proposed Order under the 1963 Act.

Any organisation which has not been consulted by the Department may obtain full information about the proposals relating to metric packs for sugar from the Department of Trade and Industry, Standards Weights and Measures Division, Abell House, John Islip Street, London SW1P 4LN.

Monopoly Commission and breakfast foods

MR. John Davies, Secretary of State for Trade and Industry, has received the Monopolies Commission's Report on the supply of ready cooked breakfast cereal foods. It will be laid before Parliament and published as soon as possible.

The reference to the Monopolies Commission for inquiry and report was made on June 18, 1971. However, under Section 6 (2) of the Monopolies and Restrictive Practices (Inquiry and Control) Act, 1948, the Commission were asked, if they found that monopoly conditions prevailed, to confine their investigation to the determination of prices in the industry.

The Department of Trade and Industry are required by Section 9 of the 1948 Act to lay reports of the Monopolies Commission before each House of Parliament. When Parliament is not sitting the obligation to lay a report of the Monopolies Commission before Parliament is discharged under Section 10 of the Monopolies and Mergers Act, 1965, if the report is presented as a Command Paper.

Appointments to Design Council

MR. John Davies, Secretary of State for Trade and Industry, has authorised the appointment of four new members to the Design Council (previously the Council of Industrial Design) and re-appointed two retiring members. The new members will join the chairman, Viscount Caldecote, and the existing 23 members of the Council.

The new members are Prof. L. Bruce Archer, Mrs. Inette L. E. Austin-Smith, Mr. Julian Blackwell and Mr. Colin Forbes. The re-appointed members are Mr. T. Mervyn Jones and Mr. D. C. Lamont.

UKAEA annual report published

THE United Kingdom Atomic Energy Authority has just published its 18th Annual Report and Accounts covering the period from April 1, 1971, to March 31, 1972. Copies may be obtained from the Authority's London Office, 11 Charles II Street, London SW1Y 4QP.

Moneylenders Acts, 1900 to 1927

The following companies held orders of exemption, valid at September 30, 1972 issued under Section 6(e) of the Moneylenders Act, 1900:

A. Booth (Estates) Ltd.
Afforestation Finance Ltd.
Agricultural Central Trading Ltd.
Air Holdings (Finance) Ltd.
Airedale Investments Ltd.
AL Factors Ltd.
Alex Lawrie Factors Ltd.
All Souls Church (South Ascot) Ltd.
Alliance Aluminium Holdings Ltd.
Anglo Auto Finance Co. Ltd.
ANZ Overseas Finance Ltd.
Associated Japanese Bank (International) Ltd.
Astley Industrial Trust Ltd. (The)
Austin Morris Group Facilities Ltd.

Baldrene Ltd.
Bank of Nova Scotia Trust Company (United Kingdom) Ltd.
Bankers Trust Factors Ltd.
Barclays Export and Finance Co. Ltd.
Barclays Overseas Development Corporation Ltd.
Beaver Cowell & Partners Ltd.
Bentinck Ltd.
Bentworth Trust Ltd.
Bishopsgate Property and General Investments Ltd.
Blane & Enfield Ltd.
Book Trade Improvement Ltd.
BPI Securities (No. 2) Ltd.
British Maritime Trust Ltd.
British Medical Finance Ltd.
Buckwood Finance Ltd.
Builders and General Mortgage Company Ltd. (The)
BW Trade Facilities Ltd.

CDFC (Ceylon) Ltd.
CDFC International Ltd.
CDFC (Malaysia) Ltd.
CRCU Ltd.
Camfund Ltd.
Campbell & Lincoln Finance Ltd.
Campbell Discount Co. Ltd.
Caparo Investments Ltd.
Capital Development Co. Ltd.
Capital Finance Co. Ltd.
Capital Finance (Southern) Ltd.
Cashbonds Ltd.
Celine Finance and Investment Co. Ltd.
Charterhouse Development Ltd.
Charterhouse Securities Ltd.
Chase Manhattan Bank Trust Corporation Ltd.
Chrysler Wholesale Ltd.
Circle and Piotrkow Provident & Investment Society Ltd.
City and Colonial Trust Ltd.
Close Brothers Merchant Trust Ltd.
Cole Port Investments Ltd. (The)
Commerce International Trust Ltd.
Commercial Export Credit Co. Ltd.
Commonwealth Development Finance Co. Ltd.
Constantine Holdings Ltd.
Contemporary Finance Co. Ltd.
Council for Small Industries in Rural Areas
Coupon Finance Co. Ltd.
Crane Securities Ltd.
Credit for Industry Ltd.
C. P. Choularton Sons & Partners Ltd.
Crescent Finance Corporation Ltd.

(continued on next page)

MONEYLENDERS ACTS
continued

D. F. J. Charles Ltd.
DHP Investments Holdings Ltd.
Development Finance International Ltd.
Dominion Charter Merchant Trust Ltd.
Dorset Somerset & Wilts Investment Society Ltd.

E. C. Genner & Co. Ltd.
Eastcheap Investments (Manchester) Ltd.
Efdum Securities Ltd.
Equitable Reversionary Interest Society Ltd. (The)
Equipment Credit Ltd.

Faircliffe Finance Co. Ltd. (The)
Farnworth Finance Facilities Ltd.
Fenlock Investments
Finance Corporation for Industry Ltd.
Finance Facilities (Leeds) Ltd.
Finansurance Ltd.
Finfur Ltd.
First British American Corporation Ltd. (The)
First National Housing Trust Ltd.
Ford Financial Trust Ltd.
Ford Motor Credit Co. Ltd.
Frevale Finance Ltd.
FW Developments Ltd.

GEC Investments Ltd.
GREA Real Property Investments Ltd.
Gavel Finance Ltd.
Gee and Watson (Welfare and Benevolent) Ltd.
General Reversionary & Investment Co. Ltd.
Gleniffer Finance Corporation Ltd.
Guardian Mortgage Co. Ltd.

Henderson Administration Ltd.
Highland Leasing Ltd.
Hobbart Properties Ltd.
Home and Country Properties Ltd.

I. S. Blomfield Ltd.
Industrial Funding Trust Ltd.
Insurance Export Finance Co. Ltd.
International Finance and Services Ltd.
International Maritime Finance (Investments) Ltd.
Ivor Hill (Investments) Ltd.

John Laing Construction (Finance) Ltd.

Kingston Financial Services (Clyde) Ltd.
Kenmar Export Ltd.

Lancashire and Yorkshire Reversionary Interest Co. Ltd. (The)
Lancashire Engineering Equipment Co. Ltd.
Langersal Ltd.
Law Reversionary Interest Society Ltd. (The)
Liebherr Building Machinery Ltd.
Liverpool Reversionary Co. Ltd. (The)
Lloyds and Scottish Finance Ltd.
Lomond Trust Ltd.
London & Cleveland Property Investment Co. Ltd.
London and Provincial Investments Ltd.
London Mercantile Co. Ltd.

Mall Trust Corporation Ltd. (The)
Marsley Trading Co. Ltd.
Master Bakers & Confectioners Finance Co. Ltd.
Maybells Finance Ltd.
Melwood Investments Ltd.
Meteor Hire Purchase Facilities Ltd.
Methodist Chapel Aid Association Ltd. (The)
Midland-Citibank Factors Ltd.
Millbank Development Services Ltd.
MIT Securities Ltd.
Mobil Europe Inc.
Mobil Services Co. Ltd.
Modern Investments Ltd.
Mutual Aid Association Ltd.

National Film Finance Consortium Ltd.
Norman Frizzell (Life & Pensions) Ltd.
Normol Investments Ltd.
Northern & General Finance Ltd.
North West Securities (Finance) Ltd.

Oakmere Finance Ltd.
Ogden Street Estate Ltd.
Oxford Finance Co. (The)

Pan American Employees Mutual Association Ltd.
Pavo Finance Ltd.
Peover Investments Ltd.
Pheonix Redcliffe Ltd.
Pleasure Heating Finance & Developments Ltd.
Produce & General Investments Ltd.
Property Investment & Finance (Developments) Ltd.
Provincial Towns & Country Estates Ltd.

Raleigh Industries (Gradual Payments) Ltd.
Real Property & Finance Corporation Ltd.
Red Dragon Investments Ltd.
Reed International Ltd.
RIB Nominees Ltd.
RMC Finance Ltd.
Robert Fleming & Co. Ltd.
Roman Wall Investments Ltd.
Roman Wall Properties Ltd.
Rootes Acceptances Ltd.

Selap Ltd.
Selcar Trust Ltd.
Scottish & European Finance Co. Ltd.
Shawlands Securities Ltd.
Shield Factors Ltd.
Ship Mortgage Finance Co. Ltd.
Silvermere Finance Co. Ltd. (The)
Small Industries Council for Rural Areas of Scotland
South Birmingham Savings Society Ltd.
Southcote Finance Co. Ltd.
Southern Finance Co. Ltd.
Spiraflite (Finance) Ltd.
Star (Great Britain) Finance Ltd.
Sterlinvestments Ltd.
Stewart Salmon & Co. Ltd.
Suffolk Securities Ltd.
Syndicate Credits (Cambridgeshire) Ltd.
Syndicate Credits (Derbyshire) Ltd.
Syndicate Credits (Glamorgan) Ltd.
Syndicate Credits (Hertfordshire) Ltd.
Syndicate Credits (Lincolnshire) Ltd.
Syndicate Credits (Surrey) Ltd.

TKM Credit Corporation Ltd.
TWA United Kingdom Employees Credit Union Ltd.
Timber & General Finance Ltd.
Tokenhouse Finance Ltd.

VMC Finance Ltd.
Vernons Finance Corporation

Warrington & South Lancashire Investment Corporation Ltd. (The)
Wessex Finance Ltd.
West End Provident & Investment Society Ltd. (The)
Westminster House & Land Investment Co. Ltd.
Wharton Street Finance Ltd.
Whitehall Securities Corporation Ltd.
Worcestershire Housing & Savings Society (The)

Yelverton Finance & Trading Co. Ltd.

The following persons held certificates, valid at September 30, 1972, under Section 123 of the Companies Act, 1967, to the effect that they had satisfied the Department of Trade and Industry that they could properly be treated for the purposes of the Moneylenders Acts, 1900 to 1927 as being persons bona fide carrying on the business of banking:

African Continental Bank Ltd.
Allied Bank International
Anglo-Eastern Bank Ltd.
Astley Acceptances Ltd.
Audley Holdings Ltd.

Banco do Estado de Sao Paulo SA
Bank of Europe Ltd.
Bank Hapoalim BM
Bank of New Providence Ltd.
Bank of New South Wales Savings Bank Ltd.
Bank of Scotland Finance Co. Ltd.
Bank of Tokyo Trust Co. (The)
Barclays Bank Trust Co. Ltd.
Bear Securities Ltd.
Beverley Acceptances Ltd.
Bowmaker Ltd.
British Bank of Commerce Ltd.
Brook Securities & Co. Ltd.
Brown Harriman International Ltd.
Burlington Investments Ltd.
Burston Finance Ltd.

Cannon Street Acceptances Ltd.
Castle Finance Ltd.
C. E. Coates & Co. Ltd.
Cedar Holdings Ltd.
Cleveland Guaranty Ltd.
Clydesdale Bank Finance Corporation Ltd.
Commercial Bank of Malawi Ltd.
Commonwealth Savings Bank of Australia
Commonwealth Trading Bank of Australia
Consolidated Credits & Discounts Ltd.
Continental Bankers Agents Ltd.
Co-operative Commercial Bank Ltd.
Copleys Bank Ltd.
Credito Italiano SpA
Concorde Trust Ltd.
Corinthian Securities Ltd.
CW Capital Ltd.

Dalton Barton & Co. Ltd.
Dalton Barton (Scotland) Ltd.
David Samuel Trust Ltd.
Dawnay Day & Co. Ltd.
Drayton Corporation Ltd.
Duboff Brothers Ltd.
Dunbar & Co. Ltd.

Eagil Trust Co. Ltd.
Edward Bates & Sons Ltd.
Erwin Brecher & Co. Ltd.
European Brazilian Bank Ltd.
E. S. Schwab & Co. Ltd.

Feuchtwanger (London) Ltd.
First Chicago Ltd.
First Maryland Ltd.
First National Bank in Dallas
First National Securities Ltd.
Forward Trust (Finance) Ltd.

Gray Dawes & Co. Ltd.
G. R. Dawes & Co. Ltd.
G. T. Whyte & Co. Ltd.
Gresham Trust Ltd.
Grindleys (London) Finance Co. Ltd.

Hawtin & Partners Ltd.
Henry Ansbacher & Co. Ltd.
Heritable & General Investment Bank Ltd.
Hume Corporation Ltd.

Industrial Bank of Japan Ltd. (The)
Italian International Bank Ltd.

Jacobs Kroll & Co. Ltd.
Japan International Bank Ltd.
Julian S. Hodge & Co. Ltd.
Julius Baer International Ltd.

Knowsley & Co. Ltd.

Lloyds Associated Banking Co. Ltd.
Lloyds & Scottish Trust Ltd.
Lombard North Central Ltd.
London & County (A & D) Ltd.
London & County Investments Ltd.
London & North British Trust Ltd.

Medens Trust Ltd.
Mercantile Credit Finance Ltd.
Merrill Lynch-Brown Shipley Bank Ltd.
Midland Bank Finance Corporation Ltd.
Morris Wigram Rosenthal Ltd.

National City Trust Ltd.
National Union Bank Ltd.
N. H. Woolley & Co. Ltd.
North Carolina National Bank
Northern Commercial Trust Ltd.
Northern Trust Co. (The)

Old Broad Street Securities Ltd.
Overseas Financial Trust Ltd.

People's Bank Ltd. (The)
Pubali Bank

Raphael Robinson & Glyn
Red Dragon Securities Ltd.
Republic National Bank of Dallas
Republic National Bank of New York
Robert Fraser & Partners Ltd.
Rothschild Intercontinental Bank Ltd.
Royal Bank of Canada Trust Corporation Ltd. (The)
Royal Trust Company of Canada (The)

St. Margaret's Finance Ltd.
St. Paul's Guarantee Corporation Ltd.
Security Trust Company of Birmingham Ltd.
Société Générale (France) Bank Ltd.
Standard Bank Ltd. (Incorporated in Pakistan)
Standard Guarantee Co. Ltd.
Sterling Credit Ltd.
Sterling Industrial Securities Ltd.

Thames Guaranty Ltd.
Trade Development Bank
Trucanda Trusts Ltd.
Twentieth Century Banking Corporation Ltd.

UDT Finance Ltd.
United Dominions Trust Ltd.
United International Bank Ltd.

Vavasseur Trust Co. Ltd. (The)

Wallace Brothers & Co. Ltd.
Wallace Brothers Sassoon Bank Ltd.
Wells Fargo Ltd.
Western Bank Ltd.
Western Trust & Savings Ltd.
White Weld & Co. Ltd.
Whiteaway Laidlaw & Co. Ltd.
Williams, Glyn & Co.
Wintrust Securities Ltd.

New EC legislation

Further information on the items in this section is available from Department of Trade and Industry, Export Data Branch (EDB), Export House, 50 Ludgate Hill, London EC4M 7HU (tel. 01-248 5757, extension as indicated at end of each item), or Commercial Relations and Exports (CRE) Division, 1 Victoria Street, London SW1H 0ET (tel. 01-222 7877).

COMMON AGRICULTURAL POLICY: The texts of the following Regulations, proposed regulations and Decision which affect the various agricultural sectors in the EEC have been published in the *Journal Officiel des Communautés Européennes*. The French texts and draft texts may be seen on application.

General. The *Journal Officiel* No. C99 dated September 27, 1972 contains the draft text of a proposed regulation relating to certain measures to be taken in the agricultural sector following the development in the monetary situation. It should be noted that the text of the Regulation, when finally approved, may differ from the draft text referred to above.

Fruit and vegetables. The *Journal Officiel* No. C99 dated September 27, 1972 contains the draft texts of the following proposed regulations:

1. Amending Regulation (CEE) No. 1035/72 on the common organisation of the market in the fruit and vegetable sector.
2. Amending Regulation (CEE) No. 2518/69, laying down, in the fruit and vegetables sector, the general rules relating to the grant of export refunds and the criteria for fixing their amount.
3. Amending Regulation (CEE) No. 2517/69 specifying certain measures for improving Community fruit production.

It should be noted that the texts of the Regulations, when finally approved, may differ from the draft texts referred to above.

Preparing for Europe

A COLLECTED edition of *Preparing for Europe*—a series of articles reprinted from *Trade and Industry*—has been published by the Department of Trade and Industry.

The articles show how British firms in a cross-section of industries are gearing themselves for the enlarged European Community. These firms which are situated all over Britain have work forces ranging from 70 to 9,500 employees and their products include ribbons, sherry, electronic components and roadsweepers. Some have anticipated entry for several years and are now consolidating their position. Others are turning their attention to Community markets for the first time or are preparing a big push to gain a firmer foothold.

The principal benefits each firm most look forward to also differ. Some look to the opening up of new markets with the removal of prohibitive tariffs. Others to opportunities for volume production for a mass market or to opportunities for expansion and specialisation. Some anticipate psychological benefits which would make their products more acceptable and less 'foreign'.

But all the firms have one thing in common—the conviction that the enlarged Community holds new and exciting opportunities for them and that success will not come to he who waits, but to he who makes careful preparation.

Copies of *Preparing for Europe* can be obtained free of charge from EEC/EFTA Information Unit, Department of Trade and Industry, 1 Victoria Street, London SW1H 0ET. Tel: 01-222 7877.

Publications	—	Extension 3591
EEC questions	—	Extension 3579 or 2479
EFTA questions	—	Extension 2480 or 2479

Regulation (CEE) No. 2100/72 amends Regulation (CEE) No. 1570/70 establishing a system of standard average values for citrus fruits. (*Journal Officiel* No. L224, September 30, 1972)

Oils, fats and oilseeds. Regulation (CEE) No. 2030/72 lays down the conditions for an adjudication for the sale of colza and rape seeds held by the Dutch intervention agency. (*Journal Officiel* No. L219, September 26, 1972)

Processed fruit and vegetables. The *Journal Officiel* No. C99 dated September 27, 1972 contains the draft text of a proposed regulation amending Regulation (CEE) No. 865/68 on the common organisation of the market in processed products with a fruit and vegetable base. It should be noted that the text of the Regulation, when finally approved, may differ from the draft text referred to above.

Regulation (CEE) No. 2042/72 fixes the difference between the prices of white sugar applicable for the calculation of the levy in the sector for processed products with a fruit and vegetable base. (*Journal Officiel* No. L220, September 27, 1972)

Regulation (CEE) No. 2096/72 amends Regulation (CEE) No. 1738/72 relating to the non-application of the system of import licenses for imports of tomato purée coming from third countries. (*Journal Officiel* No. L224, September 30, 1972)

Processed agricultural products. Regulation (CEE) No. 2060/72 determines the amounts of the variable elements and the additional duties applicable, during the fourth quarter of 1972, to imports, into the Community, of goods referred to in Regulation (CEE) No. 1059/69. (*Journal Officiel* No. L222, September 29, 1972)

Milk and milk products. Regulation (CEE) No. 2031/72 amends Regulation (CEE) No. 2637/70 in so far as it concerns the period of validity of export certificates in the milk and milk products sector. (*Journal Officiel* No. L219, September 26, 1972)

Decision 72/330/CEE relates to the non-application of an export duty, specified in Regulations (CEE) Nos. 2227/71 and 673/72, to certain supplies of powdered skimmed milk within the framework of the food aid programme. (*Journal Officiel* No. L220, September 27, 1972)

Wine. Regulation (CEE) No. 2099/72 amends Regulation (CEE) No. 1718/72 regulating to the grant of aid for the transfer of table wine for which a storage contract was concluded during the 1971/2 marketing year. (*Journal Officiel* No. L224, September 30, 1972)

EDB ext. 7174/408

IMPORTS FROM NON-MEMBER COUNTRIES: *The Journal Officiel des Communautés Européennes* No. L220 dated September 27, 1972 contains the texts of the following Decisions. The French texts may be seen on application:

Decision 72/324 CEE authorising Belgium and Luxembourg to exclude from Community treatment table grapes (CCT No. 08.04 A I) originating in Spain and Albania and freely circulating in the other Member States.

Decision 72/326/CEE authorising Belgium, Luxembourg and the Netherlands to exclude from Community treatment woven fabrics of man-made fibres (discontinuous or waste) containing less than 85 per cent in weight of synthetic textile fibres mixed mainly or exclusively with finished wool or hair, manufactured with yarns of various colours (CCT No. 56.07 A ex II) originating in Romania and freely circulating in the other Member States.

Decision 72/327/CEE authorises Belgium, Luxembourg and the Netherlands to exclude from Community treatment kitchen linen of cotton (CCT No. 62.02 ex B) originating in Hungary and freely circulating in the other Member States. **EDB ext. 7174/408**

UNCTAD GENERALISED PREFERENCES SYSTEM: *Trade and Industry* dated January 27, 1972 contained a notice about a number of Regulations setting up tariff quotas and opening tariff preferences for certain products originating in developing countries for the period January 1 to December 31, 1972. The texts of the following Regulations reimposing the Common Customs Tariff duties on certain of these products have been published in the

Journal Officiel des Communautés Européennes. The French texts may be seen on application:

Common Customs Tariff no.	Description of goods	Country of origin	Full rate of duty payable from	Tariff quota or preference set up by Reg. No.
Regulation (CEE) No. 2038/72				
41.05	Other kinds of leather, except those falling within heading Nos. 41.06 to 41.08 inclusive. B. Other II not specified	Developing countries	September 30, 1972	2795/71
Regulation (CEE) No. 2039/72				
70.12	Glass inners for vacuum flasks or for other vacuum vessels, and blanks therefor	Developing countries	September 30, 1972	2795/71
Regulation (CEE) No. 2040/72				
85.04	Electric accumulators A. lead-acid accumulators	Developing countries	September 30, 1972	2795/71
Regulation (CEE) No. 2041/72				
85.19	Electrical apparatus for making and breaking electrical circuits, for the protection of electrical circuits, or for making connections to or in electrical circuits (for example, switches, relays, fuses, lightning arresters, surge suppressors, plugs, lamp-holders, terminals, terminal strips and junction boxes); resistors; fixed or variable (including potentiometers), other than heating resistors; switch-boards (other than telephone switch-boards) and control panels: B. Resistors, fixed or variable (including potentiometers) other than heating resistors	Brazil	September 30, 1972	2795/71
	(*Journal Officiel* No. L220, September 27, 1972)			
Regulation (CEE) No. 2054/72				
66.03	Parts, fittings, trimmings and accessories of articles falling within heading Nos. 66.01 and 66.02	Developing countries	October 1, 1972	2795/71
	(*Journal Officiel* No. L221, September 28, 1972)			

EDB ext. 7174/408

ECC/TURKEY AGREEMENT: The *Journal Officiel des Communautés Européennes* No. L222 dated September 29, 1972 contains the texts of the following Regulations. The French texts may be seen on application:

Regulation (CEE) No. 2055/72 relates to the opening, allocation and administration of a Community tariff quota for the period October 1 to December 31, 1972 for fresh or dried nuts, hazelnuts, shelled or not (CCT No. 08.05 G) originating in Turkey.

Regulation (CEE) No. 2056/72 relates to the opening, allocation and administration of a Community tariff quota for the period October 1 to December 31, 1972 for certain petroleum products falling within Chapter 27 of the Common Customs Tariff and originating in Turkey.

Regulation (CEE) No. 2057/72 relates to the opening, allocation and administration of Community tariff quotas for the period October 1 to December 31, 1972 for cotton yarn, not put up for retail sale, and other woven fabrics of cotton (CCT Nos. 55.05 and 55.09) coming from Turkey.

Regulation (CEE) No. 2058/72 partially or totally suspends the Common Customs Tariff duties for the period October 1 to December 31, 1972 for certain agricultural products originating in Turkey.

EDB ext. 7174/408

British companies in Europe

THE *Financial Times* is organising a two-day conference entitled 'The British Company in Europe', in association with the Institute of Chartered Accountants in England and Wales, on December 5 and 6 at the Inn on the Park, London. Mr. Michael Noble, Minister for Trade, will speak on the effects of EEC entry on British company law, and of the impact of Community regulations and directives on British companies. Discussion will also take place on the harmonisation of laws and taxes in the Community and on the European Company Statute.

ARE YOU READY FOR THE COMMON MARKET?

We are. For details of our regular, fast and low-cost groupage services to all Common Market Countries, and the ways we will help you with tariffs and export Customs transit procedures, contact your local Lep Transport Office, or:

Lep

Continental Export Dept., Lep Transport Ltd.,
Sunlight Wharf, Upper Thames Street,
London, EC4P 4AD.
Telephone: 01-236 5050, Telex: 887282/3.

NEW PUBLICATIONS

Towards an Open World Economy. (197 pages. Macmillan. £3.95. SBN 333 14349 3. Published for the Trade Policy Research Centre.) Since its inception in 1968, the Trade Policy Research Centre has devoted much effort to investigating the issues involved in formulating a major new trade initiative, and has sought to clarify the major problems confronting the international economic system, especially in regard to commercial policy questions. The Centre took the opportunity presented by the establishment at the end of 1971 of the OECD high-level group on trade and related problems and by the preparations for another round of GATT negotiations to draw together recommendations based on the results of its research. An Advisory Group of seven members who have either played key roles in commercial diplomacy or have made major contributions to international economics was set up, under the chairmanship of Frank McFadzean (Chairman of Shell Transport and Trading), to undertake this task. Their report, entitled Proposals for future trade strategy, comprises a 12-point programme amounting to a recommendation that the governments of the leading industrialised countries should embark on a reform of the international trading system. This report forms the first part of *Towards an Open World Economy*. There are recommendations on industrial tariffs, developing country exports, safeguards against market disruption, non-tariff barriers, invisible trade and capital movements, agricultural trade, East-West trade, adjustment assistance, the most-favoured nation principle, complaints and arbitration procedures of international economic institutions, and institutional arrangements for governing international economic relations. The second, and much larger part of the volume, contains eight background papers prepared under the supervision of Professor Harry G. Johnson to assist the Advisory Group in its task. Professor Johnson himself contributes papers on commercial policy and the monetary crisis of 1971 and on optional negotiating techniques on industrial tariffs. The latter paper was written jointly with Hugh Corbet, Director of Trade Policy Research Centre, who also contributes a paper on the position of the most-favoured nation principle in future trade negotiations. The other papers are by various trade policy specialists, and deal with agricultural products, developing countries in the liberalisation of world trade, escape clauses and other safeguards, negotiations for overcoming non-tariff barriers to trade, and adjustment assistance programmes. The volume concludes with a useful bibliography on current international commercial policy issues. On a point of detail, the OECD meeting referred to in the Foreword on page xiii was held in June 1971 and not 1972 as stated.

Businessman's Guide to the Centrally Planned Economy Countries. Edited by Sam Black. (188 pages. The Modino Press Ltd., 6 Conduit Street, London W1R 9TG. £3.50.) British businessmen trading with East Bloc countries are probably aware of the booklets issued by the Department of Trade and Industry in its *Hints to Business Men* series, which give basic guidance to visitors to these, and to many other, countries. This new directory supplements these booklets by providing additional information in respect of 11 East Bloc countries—Albania, Bulgaria, China, Cuba, Czechoslovakia, East Germany, Hungary, Poland, Romania, USSR, Yugoslavia. There is some preliminary general advice on trading with countries whose economies are centrally planned, notes on barter, compensation, reciprocal and clearing transactions, and lists of chambers of commerce and of British and other enbassies in the 11 countries. The main body of the work deals with each country in turn, giving general information of use to the business visitor and full directory information on Ministries, State Committees, Foreign Trading Corporation and other official and semi-official bodies concerned with economic and industrial matters. The details provided include full addresses, telephone numbers, telegraphic addresses, telex numbers and notes on the responsibilities of each body. Much of this information cannot be easily obtained from other sources, and this volume should prove a useful reference book to business men visiting these 11 East Bloc countries.

Electrical Contracting in Europe. (17 sheets in wallet. The Electrical Contractors' Association, 55 Catherine Place, Westminster, London SW1E 6ET. £1.25; £0.75 to ECA members.) Mainly to assist British electrical contractors to take advantage of the opportunities which British membership of the European Communities will provide for offering their services in the other member countries, the Electrical Contractors' Association has published this initial survey of conditions and practices in electrical contracting and retailing in eight European countries. As well as the existing member countries (excepting Luxembourg), Austria, Denmark and Switzerland are covered. The information gathered during visits paid to these countries has been tabulated in a series of loose leaf sheets, suitable for display if desired. The topics dealt with are contracts; labour; value added tax; registration requirements and regulations affecting installation of electrical equipment; commercial practices; retailing; and trade association structures. On each sheet information is provided under country headings in the form of answers to questions which are usually phrased to draw attention to differences from British practice. The publication thus provides in convenient form a basic guide to electrical contracting in Europe which companies seriously contemplating doing business in Europe can use in preparing for such a venture.

Small Businesses: how they Survive and Succeed, by Philip Clarke. (395 pages. David & Charles. £3.95. ISBN 07153 5603 8.) Using case histories of various types of small firms, the author not only illustrates the nature of small businesses and their role in the economy, but also presents a very interesting account of the experiences of small businesses and the factors which enable them to succeed. Chapters 2 to 5 deal with the circumstances which favour and inhibit the growth of small firms, and describes the way in which their style of business and management differs from large enterprises. Chapters 6 to 15 present profiles of small firms engaged in manufacturing and distribution. The following two are taken as examples: one study analyses the problems of family firms and their distinctive style of business; another dwells on the effects of the retail revolution on small shopkeepers, and shows how their survival against the supermarkets depends either on providing a personal corner shop service or on embracing voluntary trading groups and techniques like franchising. Useful hints on such general problems as raising capital and where one can go for financial advice are provided in the last two chapters. This is followed by a postscript summarising the main findings and recommendations of the *Bolton Committee of Inquiry on Small Firms*, and an assessment of the importance of this report and its effect on the future for small businesses. There is a list of books recommended for further reading. These include the 18 Research Reports which form part of the Bolton Report and books for more general reading with useful annotations. The work is completed by four appendices: Appendix 1 deals with the small firm in other countries; this provides a brief insight into practices in the Common Market countries, the USA and Japan. Appendix 2 outlines various sources of help for small firms. Appendix 3 is based on the interview outline used by the author, and is presented here to assist firms in finding out about their own companies. Finally, Appendix 4 gives the addresses of firms featured in the text. This is a very readable book which provides useful information for those already running small businesses and for those who may be thinking of setting themselves up in business.

Franchising and the Total Distribution System, by Dov Izraeli. (221 pages. Longman. £4.50. ISBN 0 582 44549 3.) Based on field research conducted over several years in the United States, Canada, Europe and Israel, the author analyses in depth the problems and future of franchising on an international scale. The subject is dealt with in three parts, Part One considers the franchising system and its environment, its advantages and disadvantages, and the legality of the system. Chapter 5 in this Part outlines the development of franchising in Britain, in relation to its future prospects and its economic effects particularly to the small trader. Part Two examines Group Trading with specific reference to the UK grocery trade. The author defines the characteristics of Group Trading, analyses the vertical and horizontal relationships which operate within voluntary chains, and compares the advantages and disadvantages of voluntary vs multiple organisations. Finally, the climate in Britain is used as a test case in the changes of food distribution since the mid-1950's. In Part Three, Dr. Izraeli develops an organisational model—The Total Distribution System (TDS)—which is designed to enable a food distribution organisation to cater successfully for growth and for effective integration and control in a flexible manner. The final chapter is devoted to a discussion of the implementation of the TDS model in a large Voluntary Group. An important feature of this book is the very comprehensive and up-to-date list of references provided at the end of each chapter, which are annotated in some cases. This book will be of interest to all those concerned with marketing and distribution.

The economy: selected indicators

Series expressed as index numbers and seasonally adjusted except where shown otherwise

	Gross Domestic Product (Expenditure estimates)	Index of Industrial Production	Consumers' Income and Expenditure				Fixed Capital Expenditure					Increase in Stocks			
							Total	Selected Components				Total	Selected Components		
			Personal disposable income	Total consumers' expenditure		Retail sales¶		Manufacturing industry	Distributive and service industries	Dwellings	Public sector excluding dwellings		Manufacturing industry	Wholesalers	Retailers
	at 1963 prices		at current prices		at 1963 prices	at 1966 prices	at 1963 prices					at 1963 prices			
Base of index £m in base year	1963 26,881	1963	1963 21,763	1963 20,127	1963 20,130	1966 11,372	1963 4,994	1963 1,070	1963 994	1963 944	1963 1,752	Series in £ million			
1966	110	113.2	122	121	107	100.0	124	127	115	128	125	250	143	25	17
1967	113	113.9	127	126	110	101.1	132	123	124	138	142	186	−37	13	22
1968	116	119.8	136	135	113	103.1	139	132	145	145	142	161	23	75	41
1969	119	122.9	143	143	113	102.4	138	141	150	132	132	342	232	26	27
1970	121	124.2	156	155	116	103.6	142	151	168	119	136	265	214	42	13
1971	122	125.0	172	171	119	103.8	141	140	165	121	144	24	−153	−4	36
1970 2nd qtr	121	123.4	155	153	116	103.6	144	150	172	119	137	97	55	11	14
3rd qtr	121	124.5	159	158	117	104.0	141	151	166	121	134	103	44	7	—
4th qtr	123	125.0	163	160	118	103.6	144	157	174	120	139	81	72	23	15
1971 1st qtr	120	124.5	164	161	116	101.8	140	145	156	114	146	89	41	−1	−44
2nd qtr	122	125.2	170	170	119	103.2	141	137	168	122	141	−67	−114	11	38
3rd qtr	123	125.6	175	175	120	104.4	141	142	168	122	141	−34	−59	−9	6
4th qtr	125	124.6	179	178	122	105.9	142	135	167	127	147	36	−21	−6	36
1972 1st qtr	121	122.2	180	181	123	106.1	145 r	139††	167	126	149	−154	−110	−6	−29
2nd qtr	124	129.3			126	108.4	144	126††	185			−86	−136	−6	31
Feb		114.6				106.1									
Mar		127.2				106.2									
Apr		127.2				107.7									
May		130.7				107.8									
Jun		129.9				109.4									
Jul		131.4				112.4									
Aug						111.9									

	Orders	Prices and Costs					Labour			Trade (§)		Balance of Payments current balance
	Engineering and electrical goods † orders on hand (end period)	Retail price index		Wholesale price index: all manufacturing industry§§		Basic hourly wage rates (all industries and services)‡	Wholly unemployed excluding school leavers and adult students	Unfilled vacancies for adults	Civil employment	Exports	Imports	
	at 1963 prices	Index‡	% increase on year earlier	Basic materials and fuel used‡	Manufactured products: home sales‡		Mid-month or monthly average		Quarter or quarterly average	at current prices		
Base of index £m in base year	Dec 1963	Jan 16, 1962		1963	1963	Jan 31, 1956	Series in thousands			1963 4,282	1963 4,362	Series in £ million
1966		116.5	*3.9*	108.0	109.6	168.5	323	255	24,835	121	121	84
1967		119.4	*2.5*	107.5	110.9	175.3	510	174	24,476	120	130	−315
1968		125.0	*4.7*	117.3	115.3	187.3	538	188	24,331	147	159	−271
1969		131.8	*5.4*	121.4	119.8	197.4	531	200	24,304	165	165	444
1970		140.2	*6.4*	126.2	127.7	217.7	568	186	24,135	184	181	681
1971		153.4	*9.4*	132.6	137.7	246.4	737	129	23,711	205	195	1,040
1970 3rd qtr		141.1	*6.9*	124.9	128.7	219.5	571	185	24,072	175	178	81
4th qtr		144.0	*7.7*	127.3	131.4	228.3	582	176	24,054	199	190	228
1971 1st qtr		147.9	*8.6*	129.7	134.4	237.5	634	150	23,824	186	189	124
2nd qtr		153.2	*9.8*	133.1	137.2	242.4	709	128	23,782	212	197	295
3rd qtr		155.3	*10.1*	134.1	139.2	248.6	772	119	23,639	214	194	364
4th qtr		157.3	*9.2*	133.6	140.0	257.0	832	118	23,598	210	199	257
1972 1st qtr		159.7	*8.0*	135.0	141.6	265.9	870	124		204	212	58
2nd qtr		162.7	*6.2*	136.1	143.4	272.0	834	133		213	217	77
3rd qtr				138.9 p	146.0 p		808 p	146 p				
Feb		159.8	*8.1*	134.6	141.6	265.6	869	126		209	215	
Mar		160.3	*7.6*	134.7	142.0	266.9	879	126		199	219	
Apr		161.8	*6.3*	136.0	142.6	268.6	871	128		208	218	
May		162.6	*6.1*	136.2	143.4	271.7	834	134		208	216	
Jun		163.7	*6.1*	136.1	144.1	275.8	798	139		224	216	
Jul		164.2	*5.8*	137.3	144.9	100.0 ‖	803	140		209 p	197 p	
Aug		165.5	*6.6*	139.3 p	146.1 p	103.5 p	807	148		139 p	190 p	
Sep				140.3 p	147.1 p		812 p	151 p				

(†) First results of a revised inquiry were published in T & I Volume 8 No 10 Sept. 7. 1972. Figures will be included on this page when the series has had time to settle down.
(‡) Not seasonally adjusted (§) On a balance of payments basis.
(§§) This now includes food industries. (††) Not directly comparable with earlier figures: see Capital Expenditure article in T & I Volume 7 No. 11 June 15 1972
(‖) New series based on July 31, 1972 = 100 (¶) Rebased on the final results of the Census of distribution for 1966.

Unit value and volume index numbers for August

THE statistics of United Kingdom imports and exports in August were severely distorted by the dock strike. Because of the system of recording used, the effect of the strike on imports is different from that on exports; the level of imports recorded was reduced in both July and August while that of exports was substantially reduced in August. The strike will continue to affect the trade figures for several months while the backlogs of imports and exports are cleared.

As well as reducing the level of trade in August the dock strike appears to have distorted the commodity composition of trade, eg traffic by air (usually in goods with high value/weight ratios) continued during the strike and so made up a larger proportion than normal of total traffic. In consequence the unit value and volume index numbers that have been calculated for August cannot be regarded as reasonable indicators of changes in the price and volume of exports and imports (see Note (a) below). The

IMPORT AND EXPORT UNIT VALUE AND VOLUME INDEX NUMBERS ON A BALANCE OF PAYMENTS BASIS

1961 = 100

	Unit Value Index Numbers (Unadjusted)			Volume Index Numbers (Seasonally adjusted)	
	Imports	Exports	Terms of Trade†	Imports	Exports
1969	126	127	101	146	149
1970	131	136	104	155	154
1971	134	148	110	160	160
1969 1st quarter	123	126	103	145	139
2nd quarter	125	127	101	146	148
3rd quarter	127	127	100	145	154
4th quarter	130	129	100	147	154
1970 1st quarter	131	131	101	148	155
2nd quarter	132	134	102	157	155
3rd quarter	131	136	104	152	145
4th quarter	131	139	106	162	162
1971 1st quarter	131	143	109	160	149
2nd quarter	135	146	108	162	167
3rd quarter	137	149	109	157	165
4th quarter	137	152	111	161	160
1972 1st quarter	139	155	111	170	155
2nd quarter	140	157	112	176	161
1971 July	137	148	109	156	163
August	137	150	109	154	163
September	138	151	109	162	168
October	137	151	110	160	162
November	137	152	111	156	150
December	137	154	112	168	168
1972 January	140	154	110	160	156
February	139	154	111	173	160
March	140	156	112	175	150
April	140	156	112	177	158
May	139	157	113	175	156
June	141	157	111	175	168
July p	142	158	111	158	155
August p	145	162	112	146	100
Average of 3 months ending May 1972	140	156	112	176	155
Average of 3 months ending August 1972 p	143	159	112	160	141

† Export Unit Value Index as a percentage of the Import Unit Value Index.
p Provisional estimates.

index numbers for some commodity groups appear to have been substantially affected by the strike and so the detailed indices for August are not being published at present; however, the indices for total trade, which are shown in the table, are also affected and should not be regarded as providing information on price and volume changes of the usual reliability. In particular, the unit value indices may well overstate the rise in prices of exports and imports in August.

Notes

(a) The unit value and volume index numbers are calculated using the price per unit of quantity and the quantity (usually weight) of goods exported or imported recorded under the detailed commodity headings in the *Overseas Trade Statistics*. If the commodity composition of trade under these headings remains fairly constant, then the index numbers are fair indicators of changes in the price and volume of imports and exports; if the commodity composition changes, then movements in the index numbers will reflect this change as well as changes in volume or price.

(b) The calculation of the unit value and volume index numbers on a balance of payments basis is described briefly in the article giving unit value and volume index numbers for March 1971, which was published in *Trade and Industry* of May 26, 1971. A more general description of the method of construction of this series of index numbers was published in the September 1963 issue of *Economic Trends*.

Retailers' stocks in August

THE value of stocks at current prices held by retailers at the end of August showed an increase of 8 per cent over the corresponding month last year; at constant prices there was an increase of 4 per cent. The change at constant prices is somewhat larger than recorded in July but much in line with the average increase for the previous four months.

LEVEL OF RETAILERS' STOCKS

Index numbers (end 1960 = 100) *and percentage increase on a year earlier*

(At cost at end of month)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
At current prices:												
1966	124	126	127	136	140	139	131	137	137	146	156	134
1967	130	132	140	142	144	142	134	139	138	147	157	137
1968	133	136	147	147	151	148	141	147	146	156	168	148
1969	142	146	159	157	161	159	152	158	157	169	183	159
1970	150	152	162	164	164	164	158	165	163	177	196	169
1971	N.A.	N.A.	174	175	179	181	169	176	178	193	210	186
1972	174	179	192	192	194	195	180	190				
1969	*6*	*8*	*8*	*6*	*6*	*7*	*8*	*8*	*7*	*8*	*9*	*7*
1970	*6*	*4*	*2*	*4*	*2*	*3*	*4*	*4*	*4*	*5*	*8*	*6*
1971	*N.A.*	*N.A.*	*7*	*7*	*9*	*10*	*7*	*7*	*9*	*9*	*7*	*10*
1972	*N.A.*	*N.A.*	*11*	*10*	*8*	*8*	*7*	*8*				
At constant (December 1960) prices:												
1966	111	113	122	121	124	124	116	120	120	128	136	116
1967	113	115	122	123	126	123	116	121	120	120	136	119
1968	115	117	126	124	127	124	118	123	122	130	139	122
1969	116	119	129	127	130	128	122	127	125	134	144	125
1970	117	119	126	126	126	125	119	124	122	131	145	124
1971	N.A.	N.A.	124	123	125	126	118	122	123	133	144	127
1972	118	120	129	129	130	130	120	126				
1969	*1*	*2*	*2*	*2*	*2*	*3*	*3*	*3*	*3*	*3*	*3*	*2*
1970	*1*	*–*	*–3*	*–1*	*–3*	*–2*	*–2*	*–2*	*–2*	*–2*	*1*	*–1*
1971	*N.A.*	*N.A.*	*–1*	*–2*	*–*	*1*	*–2*	*–2*	*1*	*1*	*–*	*3*
1972	*N.A.*	*N.A.*	*4*	*5*	*3*	*3*	*2*	*4*				

Retailers' stocks in United Kingdom at end of December 1960 were £993 million at current prices,

Index of retail sales in N. Ireland

THE index of retail sales in Northern Ireland for July was 122 (1965 = 100), 4 per cent less than in July 1971. After allowing for price changes the total volume of sales in July was 9 per cent less than a year earlier.

Index numbers of the value of sales and percentage increases on a year earlier for the main groups of trades in July are shown below. More detailed information can be obtained from the Ministry of Commerce, Index of Retail Sales, Chichester House, 64 Chichester Street, Belfast BT1 4JX (tel. Belfast (0232) 34488, ext. 336).

	July 1972	
The value of sales by:	Index number 1965 = 100	Percentage increase
All kinds of business	122	–4
Food shops	123	–5
Non-food shops	121	–4
Of which:		
Clothing and footwear shops	117	–1
Durable goods shops	146	6
Miscellaneous non-food shops	123	–7
Department and general stores	96	–6

FOOTWEAR INDUSTRY

Orders and deliveries

As foreshadowed in earlier issues of *Trade and Industry*, this monthly table of footwear statistics has now been extended to include value figures of manufacturers' orders on hand, net new orders and deliveries. It is hoped to include manufacturers' stocks of footwear, in pairage terms, shortly.

Figures preciously published in this table have also been revised in the light of the results of the new quarterly inquiry which began in the first quarter 1971. The new inquiry has a wider coverage than that from which the earlier statistics were derived and these have been adjusted in order to provide a broadly consistent series with the new inquiry. It must be emphasised however that the amended back data for 1966-70 is based on linking factors spanning the fourth quarter 1970 and first quarter 1971 only and should therefore be interpreted with caution.

Figures shown as 'actual' do not now include any adjustment for the length of the working month.

Detailed statistics from the new quarterly inquiry together with figures of exports, imports, consumers' expenditure, prices and employment are published in the Business Monitor Production Series under reference P17.

A short note on the construction of the index of production was given in *Trade and Industry* dated June 23, 1971 (page 637).

SYMBOLS USED IN ALL STATISTICAL TABLES

.. not available
— nil or less than half the final digit shown
p provisional
r revised
1 five week period
ø fifty-three week period

REVISED INDEX OF PRODUCTION, ORDERS ON HAND, NET NEW ORDERS AND DELIVERIES OF COMPLETE FOOTWEAR

Monthly average or monthly totals

	Index of production 1963 = 100	Orders on hand (end period)			Net new orders			Deliveries		
		Million pairs		£ million	Million pairs		£ million	Million pairs		£ million
1966	101	33.6			..			16.4		
1967	94	37.8			16.5			16.1		
1968	99	41.6			17.3			17.0		
1969	95	34.6			15.9			16.5		
1970	88	38.9			16.6			16.2		
1971	96	32.5		55.7	15.7			16.2		23.8
	Seasonally adjusted	Actual	Seasonally adjusted	Actual	Actual	Seasonally adjusted	Actual	Actual	Seasonally adjusted	Actual
1971 1st quarter	91	40.5	40.2	56.0	17.1	16.7	..	16.6	16.7	23.8
2nd quarter	95	43.3	38.7	67.9	16.6	16.3	26.5	15.7	16.8	22.5
3rd quarter	101	31.8	40.1	49.0	12.8	17.0	18.3	16.6	16.5	24.6
4th quarter	96	32.5	39.1	55.7	16.1	14.3	26.6	15.8	15.2	24.4
1972 1st quarter	93	37.9	42.1	54.0	18.2	17.2	25.2	16.4	16.2	25.8
2nd quarter p	90	36.6	35.4	67.5	14.3	13.5	27.2	14.7	15.8	22.7
1971 January	98	40.7	45.1	53.3	17.3	22.9	..	15.5	17.8	22.2
February	87	42.7	44.3	53.7	17.8	15.7	22.7	15.8	16.0	22.3
March	89	40.5	40.2	56.0	16.2	11.6	29.2	18.4	16.2	26.9
April	93	42.6	38.9	63.6	18.4	15.7	30.3	16.3	17.0	22.7
May	98	49.2	43.2	73.7	22.2	21.6	32.3	15.6	17.3	22.2
June	95	43.3	38.7	67.9	9.3	11.6	16.8	15.2	16.2	22.6
July	101	40.6	43.5	62.7	12.5	20.9	17.8	15.2	16.1	23.0
August	105	36.5	42.5	56.7	11.0	15.4	16.2	15.1	16.4	22.2
September	97	31.8	40.1	49.0	14.8	14.6	20.8	19.5	17.0	28.5
October	104	30.5	38.7	49.4	16.9	14.4	28.4	18.2	15.7	28.0
November	92	32.4	37.8	57.2	18.5	14.1	32.6	16.6	15.1	24.8
December	93	32.5	39.1	55.7	12.8	14.5	18.9	12.7	14.7	20.4
1972 January	96	33.4	42.9	53.1	15.6	20.7	20.6	14.7	16.9	23.2
February	89	35.3	42.5	53.0	18.1	15.2	25.2	16.2	15.7	25.3
March	95	37.9	42.1	54.0	20.8	15.7	29.9	18.2	16.1	28.9
April p	90	41.1	41.2	56.5	17.7	15.8	24.2	14.5	16.7	21.7
May p	90	44.2	42.1	70.2	17.9	15.8	37.2	14.8	15.0	23.5
June p	90	36.6	35.4	67.5	7.2	9.0	20.2	14.8	15.7	22.9
July p	101	30.6	34.5	56.0	9.1	15.8	12.1	15.1	16.7	23.6

More detail on motor trades

To increase the value to users of the motor trades turnover statistics the Department of Trade and Industry proposes to collect and publish more detailed information.

The statistics are compiled from returns made voluntarily to the Department by a panel of motor traders who provide monthly figures of their business. In their returns contributors are asked to give separate figures for sales of new vehicles, sales of used vehicles, and all other sales and receipts.

Following requests from the Motor Agents' Association and the Society of Motor Manufacturers and Traders for more detailed statistics the Department has written to the contributors, asking if they would be able and willing to supply the extra information. The suggested new statistics will distinguish wholesale trade from retail trade and give more information about sales of different types of vehicles, as well as a breakdown of 'other sales and receipts'. It is hoped with the co-operation of contributors to start collecting the additional information from the beginning of 1973.

A library for exporters

Foreign trade statistics and other economic statistics from almost every country in the world are available for reference in the Department of Trade and Industry Statistics and Market Intelligence Library at Export House, 50 Ludgate Hill, London, EC4M 7HU. A modern well-equipped library of over 85,000 volumes, it has a reading room for visitors and provides a document-copying service. There are trade directories covering 150 countries, and an expanding collection of trade catalogues of overseas manufacturers. The library opens from 9 to 5.30, Mondays to Fridays (Tel. 01-248 5757 ext. 368 or Telex No. 886143).

Turnover of the catering trades in August

THE total turnover of the catering trades in the period June to August was 2 per cent more than in the preceding three months, after allowing for normal seasonal movements. This continues the previous upward trend.

Recent percentage increases compared with a year earlier, not seasonally adjusted, for the main kinds of business are as follows. (The higher figures for August reflect the relatively low level of business in August last year.)

		All caterers	Licensed hotels and holiday camps	Restaurants, cafes and fish and chip shops	Public houses	Canteens
1972	2nd quarter	9	13	10	8	6
	July	10	12	14	8	4
	August	13	13	15	13	3

Note

The Easter holiday was split between the first and second quarters in 1972 but fell entirely in the second quarter in 1971.

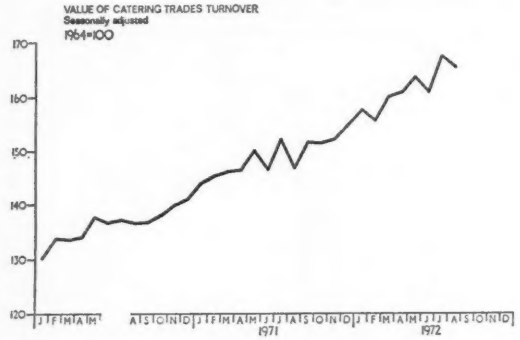

VALUE OF CATERING TRADES TURNOVER
Seasonally adjusted
1964=100
170
160
150
140
130
120
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1971
1972

TABLE 1. TURNOVER OF ALL CATERERS SEASONALLY ADJUSTED

Index numbers of turnover per week (†) 1964 = 100

		Value at current prices (Turnover in 1964 — £1,985 million)
1964		100
1965		106
1966		111
1967		113
1968		117
1969		126
1970		136
1971		149
1969	1st quarter	123
	2nd quarter	125
	3rd quarter	127
	4th quarter	129
1970	1st quarter	133
	2nd quarter	136
	3rd quarter	137
	4th quarter	140
1971	1st quarter	145
	2nd quarter	148
	3rd quarter	150
	4th quarter	153
1972	1st quarter	158
	2nd quarter	162
1972	January	158
	February	156
	March*	160
	April	161
	May	164
	June*	161
	July	167
	August	165
1972	March-May	161
	June-August	164
Percentage increase		2

† The monthly periods consist of four weeks except those marked * which are of five weeks. The August 1972 period was the four weeks from July 30, 1972 to August 26, 1972. The August 1971 period was the four weeks from August 1, 1971 to August 28, 1971.

Domestic furniture deliveries in July 1972

THE monthly statistics of domestic furniture deliveries and orders on hand have been revised to take account of the information collected in the quarterly inquiry into sales of furniture (the results of which are published in Business Monitor P83). The figures for the latest months may be subject to revision, when further data from the quarterly inquiries becomes available. On the basis of the new method of calculation, the figures for the last 13 months are as follows:

DELIVERIES AND ORDERS ON HAND

Seasonally adjusted volume indices (1963 = 100)

		Manufacturers' deliveries of domestic furniture (£ million)	Value of orders on hand at end-month (£ million)	Deliveries	Orders on hand
1971	July	16.6	43.1	142	214
	August	18.3	48.9	146	216
	September	25.2	49.5	151	219
	October	25.0	51.6	151	220
	November	25.9	56.1	147	239
	December	23.6	52.4	154	252
1972	January	22.8	51.2	167	260
	February	21.5	56.7	142	265
	March	25.3	57.8	157	288
	April	22.4 p	57.5 p	166 p	287 p
	May	25.5 p	61.1 p	164 p	301 p
	June	26.7 p	60.8 p	168 p	310 p
	July	20.5 p	67.8 p	173 p	316 p

p = Provisional.

Detailed statistics of UK overseas trade

Each month the Overseas Trade Statistics give a considerable amount of detail about United Kingdom imports, exports and commodities and, for many of them, the most important countries of consignment. The information in these statistics is a summary of much more detailed information. This is derived from declarations made by traders to HM Customs and Excise under the descriptions in the Tariff and Overseas Trade Classification (which has about 6,000 commodity headings); there are 188 specified countries for consignment. The fully detailed information is not published on a monthly basis but, when circumstances allow, HM Customs and Excise can supply detailed information about trade under individual descriptions of the Tariff and Overseas Trade Classification and with individual countries or through United Kingdom ports, either for particular months or for longer periods. A charge is made which covers the cost of the service. Applications should be made to the Statistical Office, Bill of Entry Section, HM Customs and Excise, 27 Victoria Avenue, Southend-on-Sea, Essex, SS2 6AL (Tel. Southend (0702) 49421, ext. 316 or 323 for Imports, or ext. 314 or 315 for Exports; Telex 99112 CUSEX Southend).

Business Monitors make it easy to get the facts about your industry. But before we can give you the facts there's something we have to know.

Please send me full details of Business Monitors.

Name _____

Company _____

Address _____

_____

Department of Trade and Industry, Room 306,
Gaywood House, Great Peter St, London SW1P 3LW.

With the help of Business Monitors you can compare the performance of your own firm with that of your industry as a whole.

They contain the latest statistics about a very wide range of topics.

You can see which product sales are expanding and providing market opportunities.

And in many cases you can see what is happening to competing products, and follow the experience of industries you supply or that supply you.

You'll find Monitors can be an invaluable aid in effective marketing and planning. You simply order the titles you want, and pay by annual subscription.

The four series that are published monthly, quarterly or annually are Production, Service and Distributive, Civil Aviation, and Miscellaneous.

Each series breaks down into sub groups of information which can be ordered separately. They are constantly being updated so when you return the coupon, we'll send you the latest list and order form.

Business Monitors available

THE following titles and issues of Business Monitor are now available and copies may be obtained by annual subscription from HMSO, PO Box 569, London SE1 9NH.

Production series

Monthly at £1 a year post free:
Tools and implements for May.

Quarterly at 37½p a year post free:
Agricultural machinery (except tractors) for first quarter
Engineers' tools for first quarter
Timber (sawmilling, etc. and builders' woodwork) for first quarter
General printing and publishing for first quarter
Telecommunication equipment for second quarter
Tobacco for first quarter
Glass for first quarter
Footwear for first quarter
Textile machinery and accessories for second quarter.

Service and distributive series

Monthly at 60p each a year post free:
Catering trades for August

Miscellaneous series

Monthly at £5.25 a year post free:
Motor vehicle registrations for August

Quarterly at 37½p a year post free
Overseas travel and tourism for second quarter.

A complete list of titles of Business Monitors was last published in *Trade and Industry* on September 21 on page 537.

British Film Fund Agency returns

THE British Film Fund Agency has published the following information for the four weeks ended August 26, 1972.

Distributors' earnings submitted	£	£
High cost films	584,594	
Low cost films:		
Eligible (after multiplying by 2½)	84,274	
Not eligible for 2½ times rental	6,762	
		675,630
Films of less than 3,000 ft. (after multiplying by 2½)		26,770
		702,400
Levy collections paid to Agency by HM Customs and Excise to August 28, 1972, including an estimate of collections approximately covering entertainments for four weeks ended August 26, 1972.		309,100

The tenth interim allocation for the fifteenth distribution period will be at the rate of 44 per cent.

The BBC Export Promotion Service

The primary aim of the BBC Export Promotion Service is to report Britain's progress as an industrial and trading nation and thus help to promote a favourable climate for exports. Every day the BBC tells the world about British business, industry, finance, technology, agriculture and science. It reports British achievements, progress and know-how, using the expert knowledge of its specialist reporters. Products and manufacturers are named in these industrial broadcasts and inquiries resulting are passed on to manufacturers. The BBC broadcasts overseas in English and 39 other languages. Manufacturers who have an interesting story about British inventions, new products, unusual or striking export achievements, participation in overseas fairs, visits abroad, etc., are invited to contact the BBC. Telephone the Export Liaison Manager, BBC External Services, at 01-240 3456, Ext. 293/2039 or write; Export Liaison Manager, BBC External Services, Bush House, London WC2B 4PH.

New Monitor for agricultural machinery

THE first results of a new quarterly statistical inquiry into manufacturers sales of agricultural machinery (excluding tractors) has now been published. The results, which are for the first quarter of 1972, are published in the Business Monitor series.

The inquiry was started after consultation with industry and is designed as a part of the new system of industrial statistics which is being developed by the Government Statistical Service. As well as meeting official statistical requirements, the inquiry will also provide private industry with detailed sales information for marketing and management purposes. As part of the Government's plan to centralise the collection of statistics from industry the inquiry is being conducted by the Business Statistics Office at Newport.

Copies of the Business Monitor, reference P63, are available on subscription of 37½p per annum (including postage) from Her Majesty's Stationery Office, PO Box 569, London SE1 9NH.

Retail Sales in August—correction

IN the penultimate line of the section on the rebased series on page 36 of *Trade and Industry* for October 5, 1972, the word 'higher' should have been 'lower'. The sentence should therefore read:

The rebased index of the value of total sales in 1971 is about ½ per cent lower than the previously published index but, because of the reweighting of the price deflators used to derive the constant price series, the volume of retail sales by all kinds of business is about 1 per cent below the previous estimate.

Cinema admissions and takings in May

DURING May, counted as a four-week period, the weekly average of admissions to cinemas in Great Britain was 3.39 million and the weekly average of gross box office takings was £1.23 million. The comparable figures for May 1971 were 3.34 million and £1.13 million respectively.

Registrations of British and foreign films

The following are details of films registered by the Department of Trade and Industry under the Films Acts 1960 to 1970 during the week ended Friday, October 6, 1972. BR/E indicates that the film is a British quota film.

Title of film	Registered No.	Playing time minutes	Date of registration	Registered in the name of	Maker's name
			BRITISH		
Dracula AD 1972	BR/E 36415/8/10/77	97	October 3	Columbia-Warner Distributors Ltd.	Hammer Film Productions Ltd.
A Modern Odyssey	BR/E 36416/8/10/77	27	October 3	Columbia-Warner Distributors Ltd.	Polonius Film Services
Hide and Seek	BR/E 36417/8/10/77	61	October 3	Children's Film Foundation Ltd.	Eady-Barnes Productions Ltd. (for Children's Film Foundation Ltd.)
Review No. 2—26th Year	BR/E 36418/8/10/77	10	October 5	Data Film Distributors Ltd.	National Coal Board
Movietone News 2261	BR/E 36221/8/10/77	8	October 6	Twentieth Century-Fox Film Co. Ltd.	British Movietonews Ltd.
Movietone News 2261A	BR/E 36222/8/10/77	7	October 6	Twentieth Century-Fox Film Co. Ltd.	British Movietonews Ltd.
			FOREIGN		
Halls of Anger	F 36419	100	October 5	United Artists Corporation Ltd.	Mirisch Productions Inc.
Homo Eroticus	F 36420	114	October 5	Border Film Productions (London) Ltd.	Atlas Film

Index to statistics and organisational information published regularly in TRADE and INDUSTRY

A = annually M = monthly Q = quarterly 6M = every six months.

Dates before October 21, 1970, refer to articles in the *Board of Trade Journal*.

Title	Last published
Air transport:	
aircraft noise at Heathrow and Gatwick airports (Q)	May 25 1972
civil aviation balance of payments (A)	March 16 1972
trade by air (6M)	Sept 21 1972
Balance of payments:	
quarterly figures (Q)	Sept 21 1972
trends in invisible transactions (Q)	Sept 28 1972
Bankruptcy orders (Q)	Oct 5 1972
Business names and limited partnerships (A)	Feb 10 1972
Capital expenditure:	
distributive and service trades (A)	April 28 1971
manufacturing, distributive and service industries (Q)	Oct 5 1972
Catering trades turnover (M)	This week
Chemicals industry activity (Q)	Sept 14 1972
Companies:	
acquisitions and mergers (Q)	Aug 10 1972
new registrations:	
Gt. Britain (M)	Sept 21 1972
N. Ireland (M)	Sept 28 1972
Computers, UK market (Q)	July 13 1972
Construction work overseas (A)	Oct 7 1971
ECGD business (Q)	Sept 28 1972
Electronic capital equipment (Q)	Aug 3 1972
Engineering industries, sales and orders (M)	Sept 7 1972
Film industry:	
British Film Fund Agency returns (M)	This week
cinema admissions and takings (M)	This week
overseas payments and earnings (A)	July 20 1972
registration of films (A)	Feb 3 1972
trends in film going (A)	Aug 19 1971
Food:	
consumption levels (6M)	July 20 1972
household consumption (Q)	Aug 10 1972
Footwear industry	
production, orders and deliveries (M)	This week
Foreign trade:	
EFTA (Q)	March 23 1972
industrial countries' trade and production (Q)	Aug 17 1972
world exports of manufactures (A)	Sept 30 1970
Foreign trade of the UK:	
ECGD business (Q)	Sept 28 1972
direct exporters and credit terms (A)	April 13 1972
unit value and volume index numbers (M)	This week
value (M)	Sept 21 1972
value, analysis of trends (Q)	Sept 7 1972
Hire-purchase business (M)	Oct 5 1972
Industrial development certificates:	
approvals (Q)	April 27 1972
refusals (A)	July 15 1971
Industrial production:	
index numbers (M)	Sept 21 1972
N. Ireland index (M)	Aug 24 1972
Wales index (Q)	Sept 28 1972
Insurance companies, investments and assets (A)	Aug 10 1972
Investment:	
book values of overseas direct investments (every 3 years)	Sept 23 1970
industry's investment intentions (3 times a year)	June 15 1972
investment and earnings overseas (A)	March 23 1972
Machine tools, deliveries and orders (Q)	Aug 31 1972
Man-made fibres:	
deliveries (Q)	Aug 17 1972
production (M)	Sept 7 1972
production, quarterly analysis (Q)	Aug 17 1972
Motor industry:	
car and commercial vehicle production (M)	Sept 28 1972
estimated figures	Sept 14 1972
motor trades turnover (M)	Sept 21 1972
Office development permits (Q)	Sept 7 1972
Pension funds, investments and assets (A)	Aug 10 1972
Retail prices index (M)	Sept 28 1972
Retail trades:	
sales (M)	Oct 5 1972
sales, N. Ireland (M)	This week
stocks (M)	This week
Royalties, overseas transactions (A)	March 30 1972
Shipping, nationality of vessels in UK seaborne trade (A)	March 2 1972
Steel consumption and stocks (Q)	Sept 21 1972
Stocks:	
distributive and service trades (A)	April 28 1971
manufacturers' and distributors' (Q)	Oct 5 1972
retail (M)	This week
Television, overseas payments and earnings (A)	Aug 5 1971
Textiles:	
activity in the industry (Q)	July 13 1972
cotton industry production (M)	Oct 5 1972
hosiery production (M)	Sept 21 1972
made-up clothing, orders and deliveries (M)	Sept 7 1972
orders and deliveries (M)	Oct 5 1972
wholesale houses' sales (M)	Sept 21 1972
wool exports (Q)	Sept 7 1972
wool output (M)	Oct 5 1972
Tourism:	
international (A)	Oct 28 1971
UK tourist traffic (M)	Sept 21 1972
UK official reserves (M)	Sept 14 1972
Wholesale prices:	
average prices of selected commodities (A)	March 9 1972
index numbers (M)	Sept 21 1972

Dept. of Trade and Industry organisation, etc.

Subjects	Last published
British commercial representation overseas	Oct 5 1972
Business Monitor titles	Sept 21 1972
Customs notices of interest to exporters	Sept 7 1972
ECGD local offices	Oct 5 1972
Guide to DTI	Aug 31 1972
Official Receivers' offices	May 20 1970
Programme of trade promotions	July 20 1972
Release dates of economic statistics	Sept 28 1972

MISCELLANEOUS ADVERTISEMENTS

30p per line, minimum £1.50 payable in advance, Box No. 50p
Orders for advertisements should be addressed to HM Stationery Office, Room D92, Atlantic House, Holborn Viaduct, London EC1P 1BN
Replies to Box Numbers should be addressed to Box No.—Trade and Industry, Room D92, Atlantic House, Holborn Viaduct, London EC1P 1BN

TYRES AND WASTE RUBBER. The Sterling Tyre Co. Ltd., are exporters of tyres and tubes and waste rubber. Huge stocks for sale. all grades and sizes, surplus new and good part-worn, repairable tyres, tyre casings for remoulding, scrap tyres for industrial purposes expertly graded to customers requirements credit facilities available for approved customers. The Sterling Tyre Co. Ltd., First Avenue, Montague Industrial Estate, Edmonton, London, N.18. Tel: 01-807 2150.

FOLDING BEDS. Large quantity Metal Folding Bedsteads required for export. Preferably packed for shipment in fully K.D. condition. Must be cheap; unused surplus stock may be of interest. Every possibility regular bulk orders. Offers to: Box S.7302.

'FLASH' Carton Case Opener. The opening of Fireboard Cases, a task of some difficulty, time and waste, effected quickly and efficiently by the use of this simple hand tool. Also Commercial and Industrial Stapling Equipment. The Flash Carton Opener Co. Ltd., Ambleside Avenue, London, S.W.16. Tel 01-769 0308/5960.

GOVERNMENT SALES

MINISTRY OF DEFENCE

October 18/19, 1972 Miscellaneous Stores

Location: Regional Depot RAOC, Hereford

Auctioneers: Russell Baldwin & Bright (Dept. L), 20 King Street, Hereford HR4 9DB (Tel: 0432 4366)

Fork lift trucks; industrial tractors; trailer mounted compressors; generators; 10-ton trailers; road gritter; mechanical loading shovels; electric drills; tyres; batteries; jacks; industrial coal, tentage; tarpaulin sheets; mosquito and camouflage nets; generator test benches; oscilloscopes; avo testers; avometers; radio receivers; record players; Rolleiflex cameras; watches; binoculars; theodolites; various clothing including, drawers; vests; outer clothing; fold flat tables; airmen's wardrobes and other furniture; large quantity of plates and other kitchen equipment; carpets; aircraft, wireless and electrical equipment and spares; scrap canvas, rags and woollens.

October 24/25, 1972 Miscellaneous Stores

Location: Auctioneers Premises

Auctioneers: Woolland Son & Manico (Dept. L), Kinterbury House, St. Andrew's Cross, Plymouth PL1 2DQ (Tel: 0752 69692)

Miscellaneous items of seamen's surplus clothing including, caps; blue overalls; tropical shorts; blue serge and canvas trousers; white collars; raincoats and raincoat linings; storage bags; shoes; ankle boots; leather knee boats; slippers; canvas jackets; white nylon and khaki poplin shirts; blue serge trousers, etc. mobile diesel generator; Niagra Merlin vehicle washer; surveying instruments; electric cable drums; kitchen equipment; textiles; and many other items of miscellaneous surplus equipment.

TYRES
and
Graded Waste Rubber
and raw materials
for the
Rubber Industry
World Wide Exporters

WILLIAM TYZACK
FIRST AVENUE
EDMONTON, LONDON, N.18
TEL: 01-807 2150

November 1, 1972: Miscellaneous Stores

Location: The Astoria, Roundhay Road, Leeds

Auctioneers: Bartle & Son (Dept. L), 52 Merrion Street, Leeds LS2 8JH (Tel: 0532 20898)

Lathes; drilling, grinding and milling machines; circular saws; wood working machines; fork lift trucks; pallet transporters; press; shearing machine; hacksaw; steam cleaner; fire fighting equipment; cable; tyres; electrical, wireless and signal equipment; vehicle spares; tool kits and hand tools; household and kitchen equipment; electric fires; watches; jerricans; tape recorders; canvas; blankets; sheets; bivouac and other tents; ground sheets; camp equipment; greatcoats; battledress; raincoats; boots and shoes, etc.; chairs; tables; chests of drawers; desks and beds.

November 8/9, 1972 Miscellaneous and Vehicles and Plant

Location: Ordnance Storage and Disposal Depot, Ruddington, Notts.

Auctioneers: Walker, Walton & Hanson (Dept. L), Byard Lane, Bridlesmith Gate, Nottingham NG1 2GL (Tel: 0602 54272)

Saloon cars; estates; limousines; road making plant; heavy duty trucks; light vans; cranes; tippers; dumpers; refuellers; coaches; ambulances; breakdown and dropside trucks; fork lift trucks; graders; motor cycles, etc.

Catalogue of the above sales obtainable from relevant auctioneers about two weeks prior to and up to date of sale, price 10p (postal order only).

Sale by Tender Machine Tools

Pedestal, pillar and radial drills; vertical and universal grinders; lathes; horizontal, universal and vertical millers; planers; saws; sheetmetal working machines etc. Located at Farnborough and Christchurch, Hants. Permission to view on presentation of Tender Form only, obtainable from Ministry of Defence, Directorate of Sales Supply 6aiv, First Avenue House, High Holborn, London WC1V 6HE. Tenders must be returned by 10 a.m. October 24, 1972.

Patent Office publications for industry

The Patent Office offers industry a wide range of publications. These include the Official Journal (Patents), the Trade Marks Journal, British Patent Specifications, Illustrated Abridgements of Patent Specifications, Reports of Patent, Design and Trade Mark Cases, and 50-year subject matter file lists of British Patent Specifications. Details of these and other publications may be obtained by post from Sale Branch, the Patent Office, Orpington, Kent, BR5 3RD; or by personal application at the Public Sale Counter of the Patent Office, 25 Southampton Buildings, London, WC2.

BRITISH GOVERNMENT CONTRACTORS

These announcements are restricted to firms and companies on the lists of Contractors to H.M. Government Departments

Lucyware

the first choice in guaranteed plastic housewares

Dustbins Vegetable Rack Set Swing Top Bins Mop Bucket Pedal Bin Waste Paper Bin etc. etc.

Write today for illustrated literature on all Lucyware products.

Cope Allman Plastics Limited
Fitzherbert Road, Farlington, Portsmouth
Tel. Cosham (07018) 70102

MAUN HAND TOOLS

The best to get hold of

Manufacturers of stationers punches eyeletting tools, pliers etc.

Contractors to H.M. Stationery Office, The Ministry of Defence and the G.P.O.

MAUN INDUSTRIES LTD.
Mansfield, Notts. Telephone: 24525

KEF

of Maidstone

Sweepers for Industry

KEF, Tovil, Maidstone, Kent, England.
Tel: Maidstone 58361 Telex 96197.

THE QUEEN'S AWARD TO INDUSTRY FOR TECHNOLOGICAL INNOVATION IN AUTOMATED FEED MILLING TO SCOTTISH MECHANICAL LIGHT INDUSTRIES LTD

FEED PLANTS WITHOUT LABOUR

1969

High quality animal feeds in continuous flow production with low capital outlay and negligible running cost.

From 3 Tons/hr to 15 Tons/hr

AUTOMATED FEED MILLS LIMITED

SCOTMEC WORK, AYR, SCOTLAND
TEL. AYR (0292) 64601

ALUMINIUM HOLLOWARE

Catering equipment for hotels, canteens, restaurants, etc.

Williams (Pressings and Spinnings) **Co. Ltd.**

Crown Street,
Wolverhampton,
Staffs.
Telephone: Wolverhampton 25979

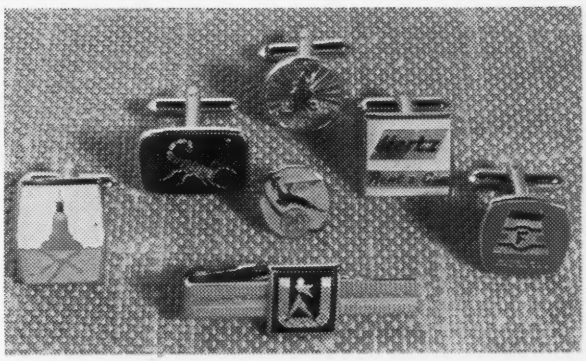
HARD ENAMEL BADGES ★ CUFF LINKS
CRESTED PEWTER TANKARDS
MEN'S WEAR ACCESSORIES

LEATHER AND PLASTIC BACKED CAR KEY FOBS

Custom made for sales promotion depicting company logos, trade marks, town crests, universities, etc.

MANHATTAN-WINDSOR GROUP
STEWARD STREET, BIRMINGHAM 18, ENGLAND

Telephone: 021-454 6404 **Telex: 338633**



to advertise in

TRADE AND INDUSTRY

telephone

01-248 9876 ext 6147/8

FACING MATTER: £64.00 per page and pro rata to ⅛ page

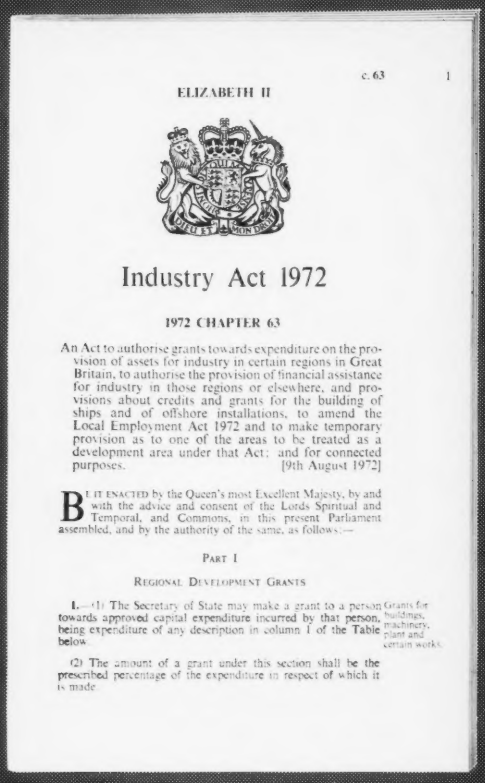
Colour (cover pages II, III and IV):

black plus second colour, blue, as used on cover page 1	£ 85.00
black plus two colours, including blue, as used on cover page 1	£ 95.00
black plus three colours	£105.00

Centre 4 pages by arrangement

rate card from
HMSO (P3)
Room D92
Atlantic House
Holborn Viaduct
London EC1P 1BN

The chance of a lifetime for your firm?



c. 63 1

ELIZABETH II

Industry Act 1972

1972 CHAPTER 63

An Act to authorise grants towards expenditure on the provision of assets for industry in certain regions in Great Britain, to authorise the provision of financial assistance for industry in those regions or elsewhere, and provisions about credits and grants for the building of ships and of offshore installations, to amend the Local Employment Act 1972 and to make temporary provision as to one of the areas to be treated as a development area under that Act; and for connected purposes. [9th August 1972]

BE IT ENACTED by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

PART I

REGIONAL DEVELOPMENT GRANTS

Grants for buildings, machinery, plant and certain works.

1.—(1) The Secretary of State may make a grant to a person towards approved capital expenditure incurred by that person, being expenditure of any description in column 1 of the Table below.

(2) The amount of a grant under this section shall be the prescribed percentage of the expenditure in respect of which it is made

Read on and find out:

If you are planning to expand your business, you could be eligible for considerable benefits under the Government's new package of financial incentives for industrial projects in Britain's Areas for Expansion. The more generous scale of assistance now available could benefit your firm in many ways.

Where are the areas? The Areas for Expansion have been extended. They cover the whole of Scotland, Wales, and Northern Ireland, Northern and North-West England, Yorkshire and Humberside, some parts of the Midlands and much of South-West England. Whether your firm is planning to expand into, or to expand or modernise within these areas, your project could qualify for considerable benefits.

What are the new benefits? You could qualify for substantial grants towards the cost of new building and, depending on the Area, of new plant and machinery. These grants are broadly for manufacturing, mining and construction activities. They are not tied to the provision of additional employment.

Additional help for projects providing new employment 1. Capital Loans. You could be eligible for these on favourable terms. Or, alternatively, you could get relief on the interest costs of finance from non-public sources.

2. Removal Costs. There are grants which will go a long way towards the costs incurred in moving a business into the Areas for Expansion. (Certain service industry projects may be considered for these two benefits.)

3. Rent-Free Factories. Government factories are available for rent or sale. You could qualify for a rent-free period of two years.

Other benefits Other Government incentives include grants for training new labour and free courses for supervisors and instructors.

The Industrial Expansion Teams—and how they can help you Get in touch with the Expansion Team at the DTI Headquarters in London, or with one of the regional Teams. They'll give you all the facts, sound impartial advice, and valuable on-the-spot assistance in setting up your project.

Fill in the coupon for free copies of the booklets "Room to Expand" and "Incentives for Industry." Or phone the Expansion Team at any of the telephone numbers shown.

Headquarters.
London, tel: 01-834 2255 ext. 88

Scotland.
Glasgow, tel: 041-248 2855

Wales.
Cardiff, tel: 0222-62131

Northern Region.
Newcastle-upon-Tyne, tel: 0632-27575

North West.
Manchester, tel: 061-236 2171

Yorkshire & Humberside.
Leeds, tel: 0532-38232

East Midlands.
Nottingham, tel: 0602-46121

West Midlands.
Birmingham, tel: 021-643 8191/8221

South West.
Plymouth, tel: 0752-21891 or
Bristol, tel: 0272-21071

London & South East.
London, tel: 01-828 4355 ext. 50

Eastern Region.
London, tel: 01-828 6271 ext. 104 or 61

To: The Industrial Expansion Team, Department of Trade and Industry,
Millbank Tower, Millbank, London SW1P 4QU.

Please send me full details of the benefits available in the Areas for Expansion.

Name _____

Position in Company _____

Company _____

Nature of Business _____

Address _____

_____

The Areas for Expansion

Issued by the Department of Trade and Industry. TS2

Registered as a Newspaper. Published by Her Majesty's Stationery Office, Atlantic House, Holborn Viaduct, London, EC1P 1BN, for the Department of Trade and Industry, 1 Victoria Street, London, SW1H 0ET. Printed by The Garden City Press Limited, Pixmore Avenue, Letchworth, Herts .SG6 1JS.
SBN 11 721924 x